

TCTTAAA

127

SEQ ID NO:3029

SEQUENCE LENGTH:223

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03572

SEQUENCE DESCRIPTION:

GATCTAGAGT ATAAGCTGCG CAAGGGCAGA AGTTTTTATC TGGTTTGTTT ATGGATGTAT 60  
 TCTAAGAGCT GAGAACAGGG CCTGGACACA ATAAGCATT CATAAATATT TACTGAATGA 120  
 ATGAACTCCT ACCTATATTC CTATTTATAA TTTGGCTCCA CTTTATCCTA CTTTAGCTCC 180  
 CATTCAATTC AATAAAAAAA ACATTTTTTN GNACACATAT AAA 223

SEQ ID NO:3030

SEQUENCE LENGTH:132

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03573

SEQUENCE DESCRIPTION:

GATCCATCTC AGTCACTTTT TCCCCTGCAA TCGCTCTTGT GAAATTGTGT AGAGTGTTTG 60  
 TGAGCTTTT GTTCCCTCAT TCTGCATTAA TAATAGCTAA TAATAAATGC ATAGAGNAAT 120  
 TAAACTGTGA AA 132

SEQ ID NO:3031

SEQUENCE LENGTH:123

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03574

SEQUENCE DESCRIPTION:

GATCCAGTTT TNCTACAAAG AACAAAGTGG TTGACAACAG TGACAGTAAT TNCTGGAGCA 60  
 AAACCAAAAG ACATAGGTAA AGANCATATA ATTGTTAATA AAGCACACTG CTTTCAACAC 120  
 AAA 123

SEQ ID NO:3032

SEQUENCE LENGTH:124

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03575

SEQUENCE DESCRIPTION:

GATCCAAGTG TTTTAACAAT TGGGGCTGTT AAGTCTGACC ATACATCACT GTGATAGAAT 60  
 GTGGGCTTTT TCANGGGTGA AGATACAAGT CTTAACCACA GTGTAACCTA CAGTTTCCTT 120  
 TAAA 124

SEQ ID NO:3033

SEQUENCE LENGTH:270

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03576

SEQUENCE DESCRIPTION:

5 GATCAGAGCA AGCCTTGCCT CTTATCTTCG GGAAACCAGA ATATGTTTGG GGTGGTAGGA 60  
GCCACACAGA CTCTTCTGAG CCCCCTCACT CACTTCCTTC CCCCTGTGCC TTTCTTTGA 120  
GAGTGAAGGT GGGTNGAGTT GACCAGAGAA AGGGGAGAGA ATTCGGGAAA GACCCAAAGT 180  
NTTTGTAATT CTCTTTTGTG CTTTACCTA CAGAAATGGT CACATGGTTC TATTAAATA 240  
10 GCCTAATAAA CACATCTGGA GCCTGTCAAA 270

SEQ ID NO:3034

SEQUENCE LENGTH:127

SEQUENCE TYPE:nucleic acid

15 TOPOLOGY:linear

CLONE:HUMGS03577

SEQUENCE DESCRIPTION:

20 GATCTCAAAG ATACACAGTA CCTACTTAAT TCCAGCTGAT GGGAGACCAA AGAATTTGCA 60  
AGTGGATGGT TTGGTATCAC TGTAATAAAA AAGAGGGCCT GGGGAATTCTT GCGATTCCAT 120  
CTCTAAA 127

SEQ ID NO:3035

SEQUENCE LENGTH:120

SEQUENCE TYPE:nucleic acid

25 TOPOLOGY:linear

CLONE:HUMGS03578

SEQUENCE DESCRIPTION:

30 GATCCCTACC TGCTCCCGC TCCGGTTGCC AGCAGCACTC ACTGCACTCC TTTGTCATAT 60  
ACTCTGCATC ACTGTCATAC TCACANCTTC GTGAATAAAG TTGTGTGCTT TATTCGTAAA 120

SEQ ID NO:3036

SEQUENCE LENGTH:120

SEQUENCE TYPE:nucleic acid

35 TOPOLOGY:linear

CLONE:HUMGS03579

SEQUENCE DESCRIPTION:

40 GATCAGGGAC CTCACGCATC TTTTCTCAT ATACATGGNC TCTCTGTTGG CCTGCAAACA 60  
CATTNCTTC TCCGCTTATN AGACTATTTA NCTTAATAA AGCACTGGAT ATAAATCAAA 120

SEQ ID NO:3037

SEQUENCE LENGTH:176

SEQUENCE TYPE:nucleic acid

45 TOPOLOGY:linear

CLONE:HUMGS03580

SEQUENCE DESCRIPTION:

50 GATCTAAAGC TNAACAATGA AAATCTTCAG CAGAAATAGA AATNGCCGTG GATTGTAATA 60

55

CACACTGAAA TTCTNACTTT CTGAATTTAA ATGTAGAATA AATTNACCA ACTTGGAGTA 120  
CTGTATGAGT ATTTCNAGTA GGGGGAATAA ACTCAAANTT ATATTTNTNT TGCAAA 176

SEQ ID NO:3038

SEQUENCE LENGTH:119

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03581

SEQUENCE DESCRIPTION:

GATCTGAAAT GTCTGAGAGT AATAGTTTCT GTTGAATTTT TTTTGTTC TTTTCTGCA 60  
CAGTCCATTC TGTTTNNATT ACTATCTAGG CTTGAAATAT ATAGTTTGAA ATNATGAAA 119

SEQ ID NO:3039

SEQUENCE LENGTH:234

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03582

SEQUENCE DESCRIPTION:

GATCAGAATA TGACATTGCA GTAAAGNGCT TAAATAGTTT CATCTNTGGT TTTTTTTTCT 60  
AGACACTTTT CTTTTATCCC AGNCATCTCT GAATTTACAT TTTATATTAA AGAAATTGAG 120  
CTATCCATAC AACCTGTATT TACTTTAATT TCACTATGCT TTCAGCTTAC TTTATTGTAT 180  
GNTATGTAGG TCTAAATAT AGTTTGAGTC AAATAAAATT AGGGGGGCTT TAAA 234

SEQ ID NO:3040

SEQUENCE LENGTH:132

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03583

SEQUENCE DESCRIPTION:

GATCATGACA CTNAAGCGTG ATGAGACGCT CCAGGATGGC TGTNATACTC ACTTCTGCAA 60  
GGTCAATGAG AGAGGAGAGT ACTTCTGGGN GAAGAGGGTC ACAGGCTNCC CACCCTTTNA 120  
TGAACACANG TN 132

SEQ ID NO:3041

SEQUENCE LENGTH:118

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03584

SEQUENCE DESCRIPTION:

GATCCCTAAA AATGTTGAGG GACTTCTGTT CATTCACTCC GAGAACATTG GCTTCCACAT 60  
CACAGTATCT ACCCTTACAT GGTTTAGGAT TAAAGCCAGG CAATCTTTTA CTATGAAA 118

SEQ ID NO:3042

SEQUENCE LENGTH:117

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03585

SEQUENCE DESCRIPTION:

5 GATCGGACCG TTCATGCTGC CTATAGGCAT TATGTCCCTC AAAAAAAAAAC TCCTTNCCT 60  
GCATCCTGTG TACAACATGA CATTTTAAAC CAATCCAATC TAAAAATGTN CCAGAAA 117

SEQ ID NO:3043

SEQUENCE LENGTH:117

10 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03586

SEQUENCE DESCRIPTION:

15 GATCAGAAGT GGCAGTCTAT AACTNAAAAT GTGGTAAAGT ACTTGANGCA AACATCCCGC 60  
ATCGCTGTTG GACCTCTNAN ACTTTCTACT TTAACAGTTT CACAGTCTTT NCCAGTN 117

SEQ ID NO:3044

SEQUENCE LENGTH:116

20 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03587

SEQUENCE DESCRIPTION:

25 GATCTCCTCC ACCCTGTACC AGGCAGCAGC TCCAGTCCTC ACACCAGCCA AGGTCACAGG 60  
CAAGAGCAAG AAGAGAACT GACCCTGAAT GTTCAATAAA GTTGATTCTT TGTAATA 116

SEQ ID NO:3045

SEQUENCE LENGTH:116

30 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03588

SEQUENCE DESCRIPTION:

35 GATCTGAAAT CNNGGTCTTC CAAGGNAGAA AATCGANCTG GGAATAAAAG AGAAGACCTG 60  
TGATGGGGCA GCAGTGACGC NCTGTGGGGG GACAGGTGGA CGTGGAGAGC TCTTTN 116

SEQ ID NO:3046

SEQUENCE LENGTH:116

40 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03589

SEQUENCE DESCRIPTION:

45 GATCCTGAAG AAATCATATG TTAACATAC TTTNACACCT ACTGTGTTAT AAAATATATC 60  
ATCAGATGTG CCTTGAGAAT AGTATATGTA ACATTAAAAA AAAGTTGCTG GCTAAA 116

SEQ ID NO:3047

SEQUENCE LENGTH:115

50 SEQUENCE TYPE:nucleic acid

55



TOPOLOGY:linear

CLONE:HUMGS03590

SEQUENCE DESCRIPTION:

5 GATCCTTGGA CTTGTGTTT TTGATTNTAT GTTGATATTC TAAAAACATC TATTTTAATG 60  
TTATTTCTGT TCTAAAAATA AGATAATAAA TATTAACAAA CTTTGCTTTT TTAAA 115

SEQ ID NO:3048

SEQUENCE LENGTH:179

10 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03591

SEQUENCE DESCRIPTION:

15 GATCTCAACA AGAAGCTGTA TTTTAAGTAT TAAGACAGTT CTTTGTTAGC TGGTTTCTAG 60  
TTGGTTATCT AGTTACCAAT GCTGCAGTCC TGCAGTCACC TATACATTAT TTAATNTAT 120  
TTAACTGTTA AATGCGCTAC CCACCAATAA TGAAATAGAC CTTTATGAAA ACTGTGAAA 179

SEQ ID NO:3049

20 SEQUENCE LENGTH:239

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03592

SEQUENCE DESCRIPTION:

25 GATCCTGAGG AAAGACTTGG AAGAGACCAG CATGTCTTCA GTAGCCAAAC TACTTCTTGA 60  
GCATAGATAG GTATAGTGGG TTTNCTTGAG GTGGTAAGGC TTTGCTGGAC CCTGTTGCAG 120  
GCAAAAGGAG TAATTGATTT AAAGTACTGT TAATGATGTT AATGATTTNT TTTTAACTC 180  
ATATTATTGG GATTTTCACC CAAAATAATG CTTTTTGAAA AAAGGAAAAA AAAACCGGN 239

SEQ ID NO:3050

SEQUENCE LENGTH:114

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

35 CLONE:HUMGS03593

SEQUENCE DESCRIPTION:

40 GATCTTGGCT TTCTNTTCC TCTTCTCCTN CAGGGTGTCT GTNACTGCNN GGTACTTCCA 60  
GCCAACCTCG TGAGCCAGGC GCCCCAGATA GGCAAACTTT CTTGTAGGCT TCAN 114

SEQ ID NO:3051

SEQUENCE LENGTH:113

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

45 CLONE:HUMGS03594

SEQUENCE DESCRIPTION:

50 GATCTGTATA TGCTATCCTA ACTGTTAATT GTATTATTGA TTATNTTGAT TATCTTGCTT 60  
GAAGGTTTCACTTTTCAAT TTGATAGAAA TAAAGTTTTT NCCTGCTTAT AAA 113

SEQ ID NO:3052

SEQUENCE LENGTH:113

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03595

SEQUENCE DESCRIPTION:

GATCCTCTCT TCATTTTACT CAGCCAGGTT TTGTACTGAT GTACAGGTGT TAAATNACTT 60

CAAGTATTTT TGTAAGAGGT GTATATAATT CAATAAAAAA GGTAACAT AAA 113

SEQ ID NO:3053

SEQUENCE LENGTH:161

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03596

SEQUENCE DESCRIPTION:

GATCGACAAG GAGTACTTGC TAAAAATGGC AACAGAGGAG TGAGGAGTGC TGCTGTAGAT 60

GACAACCTCC ATTCTATTTT AGAATAAATT CCCAACTTCT CTTGCTTTCT ATGCTGTTTG 120

TAGTGAAATA ATAGAATGAG CACCCATTCC AAAGCTTTAA A 161

SEQ ID NO:3054

SEQUENCE LENGTH:111

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03597

SEQUENCE DESCRIPTION:

GATCCGNACC CCAAGCCCAT GCAACCCACG CTCGGTCCCG TTCCGGCCCC TGCNCCCCGC 60

TGCNCTTCGC TCCCCGNCCT TGCNCCGTTA GTAAACATCG CTCAAACGAA A 111

SEQ ID NO:3055

SEQUENCE LENGTH:110

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03598

SEQUENCE DESCRIPTION:

GATCTAACAA GTTACATTGT ATAGTTTCTG GGACTGTTTG AATATTCTAT TCCAATGGGC 60

ATTTATTTT TATCCTGTCA TTAACAAAAA AAGACTGTGA CCCTGCTAAA 110

SEQ ID NO:3056

SEQUENCE LENGTH:109

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03599

SEQUENCE DESCRIPTION:

GATCTCCTCC ATCCTGCTGC CCACCCCTCT TGAGTGCTTT AAGGGACAGA NCTTCCACC 60

CCTGGAAGAT GGAAATAAAC CTGCGTGTGG GTGGAGTGT AGGACCAA 109

SEQ ID NO:3057

SEQUENCE LENGTH:109

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03600

SEQUENCE DESCRIPTION:

GATCAGAGTG TTNTAAATCA TCACGCCCTT AGCTTATCCC TNGTCGAGCC AGGACACGGG 60

GTGCTTCAGT GGGTCTGTNA CCCTCTCTCC TTGAAGCATG TTGCTGNNN 109

SEQ ID NO:3058

SEQUENCE LENGTH:108

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03602

SEQUENCE DESCRIPTION:

GATCCCTGAA TGTGAACCTG AAGTTCAAAG GACTTGGAAG GCTCTGGAAT GTGTTGGTTT 60

TTCCCCCA AAATGGGTCC TAAGGAGGGT AAAGTGACTT GTTCAAA 108

SEQ ID NO:3059

SEQUENCE LENGTH:108

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03603

SEQUENCE DESCRIPTION:

GATCAGTTTC TTTNGCTTCA AGATTTGAAA CCAGAAAGGA AAGTCCNACT TGCAGATGAT 60

TGTCTTAAA ACCTAATGGA AAANTAAAAG ANAGACATAC CATGGAAG 108

SEQ ID NO:3060

SEQUENCE LENGTH:107

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03604

SEQUENCE DESCRIPTION:

GATCCATCAT TGTTACAAA CTTCATGTC AAGAACCCTT TCGTTGCATA ATGTGCAAAT 60

AGTTAAACC ACTGTACTAT ATACTTAAA ATGATTAAGA TAGTAAA 107

SEQ ID NO:3061

SEQUENCE LENGTH:252

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03605

SEQUENCE DESCRIPTION:

GATCTGGCAG CTGAGGCCCG AGGCAGGGTT GGNGTGATGC CAGGGCAAAG TGGTGAGGAG 60

AAAACAGGAA NCGGGCTTTC NCCNCATTGG TAAATGGGAA AGAGGTGAGC AACTTAAGAT 120

TGTCACAATT AATCACAAGT GTACAGGATT AGACTGGGTT TATATTTAAC TCTTGCTNCA 180  
TAGGTGTACC ATTTAAAGAG TGTATTTTAA TGCTAAGTTT AACTGCTTTA ATAAAGTTTA 240  
TTTTTAAATA AA 252

5  
SEQ ID NO:3062  
SEQUENCE LENGTH:103  
SEQUENCE TYPE:nucleic acid  
10 TOPOLOGY:linear  
CLONE:HUMGS03606

SEQUENCE DESCRIPTION:  
GATCAACAAA ATAACCTGTA TCTCCTGCTT AANTCCTTTA TACTACCTGG NGAAAAGTAT 60  
TTCCCATATT TCCAATAAAT GTCAGACACT ATTGAGAAAG AAA 103

15  
SEQ ID NO:3063  
SEQUENCE LENGTH:103  
SEQUENCE TYPE:nucleic acid  
20 TOPOLOGY:linear  
CLONE:HUMGS03607

SEQUENCE DESCRIPTION:  
GATCCTGNAT NANGCCCGGG CCAGCGAGTG CAGGGACGTG GAGGGNTTCA AAACCGAGAT 60  
GGCCATGCTG GTGACCCAGG CCAGGAAGAA CACCATCACC CNN 103

25  
SEQ ID NO:3064  
SEQUENCE LENGTH:159  
SEQUENCE TYPE:nucleic acid  
30 TOPOLOGY:linear  
CLONE:HUMGS03608

SEQUENCE DESCRIPTION:  
GATCCTCACA GTCAAGTGAC GAGGCTGGGG CTGAAAGCAG AAGCATGCAC AGGGAGGAGA 60  
CCACTTTTAT TGCTTGCTCN GGTGGATGGG TCAGGAGGGT CTGAGGGCCT GTCCCAGACA 120  
35 ATAAAGGTNC CCTCAGCGGA TGTGGGCCAT GTCACCAAA 159

40  
SEQ ID NO:3065  
SEQUENCE LENGTH:102  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03609

SEQUENCE DESCRIPTION:  
GATCCTATCG CTTTNNAGTA GAATATGAAA TATTCTTTNA GAAATCCAAT ATAAATAGGT 60  
45 TATAATAGCC ATATNCTTNA TNACTTTATT GAGATATAAT TN 102

50  
SEQ ID NO:3066  
SEQUENCE LENGTH:186  
SEQUENCE TYPE:nucleic acid  
55 TOPOLOGY:linear

CLONE:HUMGS03610

SEQUENCE DESCRIPTION:

5 GATCTNAGCT CCCACCTCCC TTCCCACCTA CTGCACTTTC CCCCTTCCCG CCTTCCAAAA 60  
CCTGCTTCCT TCAGTTTGT AAGTCGGTGA TTATATTNT GGGGGCTTTC CTTNATTN 120  
TAAAATGNAA AATTATNTA TANTCCGTAT TTAAAGTTGT AAAAAAATA NCCACAGAAC 180  
AGNGAN 186

SEQ ID NO:3067

10 SEQUENCE LENGTH:100

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03611

15 SEQUENCE DESCRIPTION:

GATCTCAGAC AGTGTGCGGC GGCACATGAG CGGCTTCCG CAGTGTCTG TTTGAGCCA 60  
CTGCAGTCTG GGCCCATCA TTAAACGGG TCGTTTAAA 100

SEQ ID NO:3068

20 SEQUENCE LENGTH:98

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03612

25 SEQUENCE DESCRIPTION:

GATCTCCAGT NAGACTCCAG GGTCTAGAC AGAGGCCAGT NTTGGCCACT CACCCACAC 60  
CCCGCGGACC CCAATAAAGG CTGTCATAGC TCCAGAAA 98

SEQ ID NO:3069

30 SEQUENCE LENGTH:98

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03613

35 SEQUENCE DESCRIPTION:

GATCCTGAAG CTNACCGGG CTCCAAAGGG CAAATGGAGC TGCCCTCNTC TGTATCAGGT 60  
TTATTGGTTG TACATATAAA TNATACTNC CTTTCAA 98

SEQ ID NO:3070

40 SEQUENCE LENGTH:107

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03614

45 SEQUENCE DESCRIPTION:

GATCCTGTTT AACAAAGATA CTTGAGACAT CCATTGTTT TAATGAAATC TGTATGGATA 60  
TGGAAATNCT TGCCCTAATA AAAGCCTACA TATACCTTCT GGTAAAA 107

SEQ ID NO:3071

50 SEQUENCE LENGTH:97

55

EP 0 679 716 A1

SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS03615

5 SEQUENCE DESCRIPTION:  
 GATCTNTCCG TTCTCAGGCC AGACCCCTGG TGCTGCCGTT AATTTTTTTT TCTCTGTCTT 60  
 TGCTGCAATN TTNAATAAA ATGCCAAAGA ACACAAA 97

10 SEQ ID NO:3072  
 SEQUENCE LENGTH:95  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS03616

15 SEQUENCE DESCRIPTION:  
 GATCCTAAAC AAATCATCTT TGTCAGTTAA GTATAGTTGC GCAAAAATTG TTAAATCCTT 60  
 TGTCTTTATT AAAGAAAAAT TTGAGTAACA TTAAA 95

20 SEQ ID NO:3073  
 SEQUENCE LENGTH:94  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS03617

25 SEQUENCE DESCRIPTION:  
 GATCTAAGTG ATGAGTCTAG GTGTGTTATT GTNCAGTTTT TNCAACTTTC CTGGAAAACG 60  
 AACTTTTCAA AATAAAAAAT TGGAAAAATA GAAA 94

30 SEQ ID NO:3074  
 SEQUENCE LENGTH:183  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS03618

35 SEQUENCE DESCRIPTION:  
 GATCACTTTG AGAAACAAAC TTTTATTAAA TGTAAGGCAC TTTTCTATGA ATTTTAAATA 60  
 TAAAAATAAA TATTGTTCTG ATTATNACTG AAAAGATGTC AGCCATTTC AATGCTTGGG 120  
 AAACAATTTT TTGTTTTTGT TCTGTTTTCT TTTTGCTTCA ATAAACAAT AGCTGGCTCT 180  
 AAA 183

40

45 SEQ ID NO:3075  
 SEQUENCE LENGTH:92  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS03619

50 SEQUENCE DESCRIPTION:  
 GATCTGCCAT ATTTGNTNTT GGTTTTAATT TTCATATCCA GCCTAAAGGT GGTGTTTAT 60  
 NATATAGTAA TAAATCATTG CTGTACAATA AA 92

55

SEQ ID NO:3076

SEQUENCE LENGTH:92

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03620

SEQUENCE DESCRIPTION:

GATCAGGCTG CCTCCTGGNT TGGNTGTCGG GGGAGCTGTC CGGCAGCCTG GCAGGGAGAT 60

GCAAGGCCTA AAGTAAAATT TTNTCAAGTA AA 92

SEQ ID NO:3077

SEQUENCE LENGTH:91

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03621

SEQUENCE DESCRIPTION:

GATCTAGCCC CTTCTCAGG CCGAGAGAAT TTCGAGCGTT ANCCGTCTCT TGGCCACCAG 60

CTAAATAAAC GGATTCTTCA TGTGTCTCAA A 91

SEQ ID NO:3078

SEQUENCE LENGTH:91

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03622

SEQUENCE DESCRIPTION:

GATCTGCTAT TGTATTCTTCT CCTCTTTATT GGAAAAAGGC CTCAGTTTTA ATTATTTTCT 60

TCCCAAAATA AATNACACAT TTGGTTACAA A 91

SEQ ID NO:3079

SEQUENCE LENGTH:239

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03623

SEQUENCE DESCRIPTION:

GATCCTGCAT CAGCATTGTA TATATGGNCT TAAGTGCCTG GCCTCCTTAT CCTTCAGAAT 60

ATTTATTNA CTTACAATCC TCAAGTTTTA ATTGATTTTA AATATTTTCC AATACAACAG 120

TTTAGGTTTA AGATGACCAA TGACAATGAC CACCTTTGCA GAAAGTAAAC TGATTGANTA 180

ANTAANTCTC CGTTTNTTC ANTTNATTTT AGTGTAATGA NAANGTTGCT TAGTATTN 239

SEQ ID NO:3080

SEQUENCE LENGTH:196

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03624

SEQUENCE DESCRIPTION:

GATCCCTGCC CTGCACCAGC ACCCTGANAT GGAGCTGAGA CTTTATTAT TGGGGGTAGG 60

EP 0 679 716 A1

GGGATGGAGG AGGTCCTCC AACATGTTG GACCCAGCTC CTTGGGGTTC CACTGACACC 120  
CCTGCCCCTG CCCCTGCCCA GAACCAAGTG CCATTCTCA CTCTGGAGCC TTAATAAACT 180  
GCAATTTGTA TCCAAA 196

5

SEQ ID NO:3081  
SEQUENCE LENGTH:90  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear

10

CLONE:HUMGS03625  
SEQUENCE DESCRIPTION:  
GATCTGTGTA CTGTTTACTT CCCACTTCCC AGAATCCCTT GTATCTCCTT TCTCGGGAAT 60  
TGTATTTTCT AATAAATGAC ATTTGAGAAA 90

15

SEQ ID NO:3082  
SEQUENCE LENGTH:90  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear

20

CLONE:HUMGS03626  
SEQUENCE DESCRIPTION:  
GATCTCTGGA AGTGTAATTN TGAAAGAAAC TTNCITGCGAG CTTTAACAAA ATGAGAAACT 60  
TNCCAAATAA AACTTGTTTT GAAGTTTAAA 90

25

SEQ ID NO:3083  
SEQUENCE LENGTH:89  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear

30

CLONE:HUMGS03627  
SEQUENCE DESCRIPTION:  
GATCCTCGGG AAGAACAAAG CTAAAGCTGC CTTTTGTCTG TTATTTTATT TTTTGAAGT 60  
TTAAATAAAG TTTACTAATT TTGACCAAA 89

35

SEQ ID NO:3084  
SEQUENCE LENGTH:88  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear

40

CLONE:HUMGS03628  
SEQUENCE DESCRIPTION:  
GATCAATCTT TGATGGTGAG GGTTTTAGAA AGGAAAAATA TAGTAAATG TGTAATTTGT 60  
CTTAATAAAA TCTATCTNTA CATCTAAA 88

45

SEQ ID NO:3085  
SEQUENCE LENGTH:94  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear

50

CLONE:HUMGS03629

55



## SEQUENCE DESCRIPTION:

GATCTAGATT GGGTGAGGGG GACGGGGATG TNAGGGAGGC AAGTGTGTN TGTACTGTG 60  
TCAATAANCT GGTTTAAAGT TGTAAGTGN GAAA 94

5

SEQ ID NO:3086

SEQUENCE LENGTH:89

SEQUENCE TYPE:nucleic acid

10

TOPOLOGY:linear

CLONE:HUMGS03631

SEQUENCE DESCRIPTION:

GATCTGAATT TCACAAAAG TTCATGGAGA AATATATTAA ATAGTACAGT TTTATGTGCT 60  
TAATTAAAGA CTGTAAACG TAAAGGAAA 89

15

SEQ ID NO:3087

SEQUENCE LENGTH:84

SEQUENCE TYPE:nucleic acid

20

TOPOLOGY:linear

CLONE:HUMGS03632

SEQUENCE DESCRIPTION:

GATCATACCA CGGCACTCCA GACTGGGGAC CAAAGTGAGA CTTGTTTCT AAAANTTAAA 60  
ATATTTAGAA TGTTTCCTAG CAAA 84

25

SEQ ID NO:3088

SEQUENCE LENGTH:82

SEQUENCE TYPE:nucleic acid

30

TOPOLOGY:linear

CLONE:HUMGS03633

SEQUENCE DESCRIPTION:

GATCCCAAGG ATGGAGAACA ACTTACCCAG TAGCTAGAAT GTTAATGGCA GAAGAGNAAA 60  
CAATAAATCA TATTGACTCA AA 82

35

SEQ ID NO:3089

SEQUENCE LENGTH:81

SEQUENCE TYPE:nucleic acid

40

TOPOLOGY:linear

CLONE:HUMGS03634

SEQUENCE DESCRIPTION:

GATCTCCAGA TGTGCATTTC CCTCTCTTAT TTAAAGTTAT GTTAAGATTA CTAAAACAAT 60  
AAAAGCTCCT AAAAAATCAA A 81

45

SEQ ID NO:3090

SEQUENCE LENGTH:79

SEQUENCE TYPE:nucleic acid

50

TOPOLOGY:linear

CLONE:HUMGS03635

55

## SEQUENCE DESCRIPTION:

GATCCAACCG TGCCTGAAGC TAGAATATCC CCTGGACTTT TCAGTTATGT GAACCAATAA 60  
 ATACCCTTTT TTGCTTAAA 79

5

SEQ ID NO:3091

SEQUENCE LENGTH:78

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

10

CLONE:HUMGS03636

SEQUENCE DESCRIPTION:

GATCTGNGAN ATATTATGGT AATTGTGTG GGGCGCCATG AACCGCACCC ATATAACACG 60  
 GTAAACTTAA TCAGCAAA 78

15

SEQ ID NO:3092

SEQUENCE LENGTH:77

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

20

CLONE:HUMGS03637

SEQUENCE DESCRIPTION:

GATCATGCTG AAAACCACTC AAACGATTAT ATTTTTTACA TTATAAGAAG TAAAATATAT 60  
 TATTCTGAAT AATGAAA 77

25

SEQ ID NO:3093

SEQUENCE LENGTH:75

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

30

CLONE:HUMGS03638

SEQUENCE DESCRIPTION:

GATCTGTGCA TTGCTCCTTC TGATTTGTGC TAAGTTGTTA AATAAGAGGG ACCCTGAGAA 60  
 AGGCCTTACT CTAAA 75

35

SEQ ID NO:3094

SEQUENCE LENGTH:75

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

40

CLONE:HUMGS03639

SEQUENCE DESCRIPTION:

GATCACACAG CTAACGAGGC TGCCTCCAGC ATTTCTGAT TTCCTCTGTG GTAATAAAAG 60  
 CTTTCTGTGC TTAAA 75

45

SEQ ID NO:3095

SEQUENCE LENGTH:78

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

50

CLONE:HUMGS03640

55

## SEQUENCE DESCRIPTION:

GATCAGAACT TACAAACCAA ACTTTTATTC TGAGAAACTG GCTGTACAAT ATNTGAAAAG 60  
 AAAGTGACAT GNAGGAAA 78

5

SEQ ID NO:3096

SEQUENCE LENGTH:74

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

10

CLONE:HUMGS03641

SEQUENCE DESCRIPTION:

GATCTTTTNN AAGTNTTCTG AAAGGAAGTA GACAGTATTA CACCCTGAAT AAATAAGGTG 60  
 TTGTTTTCCA CAAA 74

15

SEQ ID NO:3097

SEQUENCE LENGTH:267

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

20

CLONE:HUMGS03642

SEQUENCE DESCRIPTION:

GATCTACTTC CCATGCAGAA GAGAAGTCAC ATCTCCAGG GAATCGCAAT GTTGTGGCGT 60  
 CTGACTTGTA TGTACATTT GTGTAAAATG GTATATNCTT TAAAATAGTG TTGATAACTG 120  
 GAATATTGTA TGTATGCTTG GAGATGCTTT GTGTGAACCT AAGACTGTCA CTCAACAGAT 180  
 GTTGGATTGG GGNAAATCCA AAGCACAACT TCAAANTAAN NTACATTTTT AGGTTTCGAT 240  
 GCTGCAAANC ANANANANN ACANNAN 267

25

SEQ ID NO:3098

SEQUENCE LENGTH:73

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03643

SEQUENCE DESCRIPTION:

GATCATGGTG ATGTACGGGG TGAATTCTCT TGCCGTGTTG CAAATGTGTA AAATAAAGAT 60  
 TATCTGGCAG AAA 73

35

SEQ ID NO:3099

SEQUENCE LENGTH:71

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03644

SEQUENCE DESCRIPTION:

GATCCNAGNT CTANCGTCAT ATAATCATT AATATAATTA AAGTTTAATT GCTGAAATAC 60  
 TTATAATGAA A 71

45

SEQ ID NO:3100

SEQUENCE LENGTH:69

50

55

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03645

SEQUENCE DESCRIPTION:

GATCATGCAA TTCCTTCAAT TATGATGGAA AGACTTGAAC TTTCTGAAAT AAAACAAAAA 60

TACAGCAAA 69

SEQ ID NO:3101

SEQUENCE LENGTH:67

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03646

SEQUENCE DESCRIPTION:

GATCCATTTA TTGCAATTCA TGCTGAATCT AAATTATAAA ATTTAAAT AAATGCATAT 60

CCTCAA 67

SEQ ID NO:3102

SEQUENCE LENGTH:65

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03647

SEQUENCE DESCRIPTION:

GATCCGAAAC CTGTTAAACA ATAAGATGTG TTCTCGGAAA ATNAACAAG AGGTATCACA 60

AGAAA 65

SEQ ID NO:3103

SEQUENCE LENGTH:64

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03648

SEQUENCE DESCRIPTION:

GATCATCTCT TCTCCATAAG ATAGTGTGAT AACACAGTC ATGAATAAAG TTATTTTCCA 60

CAAA 64

SEQ ID NO:3104

SEQUENCE LENGTH:64

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03649

SEQUENCE DESCRIPTION:

GATCGCTCCA ATAAACATAT ATTGTGAAAA TGCATCCACA ATAAATGGAA TTCCTTCCTG 60

CAAA 64

SEQ ID NO:3105

SEQUENCE LENGTH:63

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03650

SEQUENCE DESCRIPTION:

GATCTACCTG TCTTGTGCC ACATGTTTCT AAAGTTTCCA ATAAATCACC TTCTACTGAC 60  
AAA 63

SEQ ID NO:3106

SEQUENCE LENGTH:68

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03651

SEQUENCE DESCRIPTION:

GATCAGCATC AGGCTGTTAT CAAGTCTGTT GGTGCTAAAA AGTAAANAT GAAATGTTCA 60  
AAGAGAAA 68

SEQ ID NO:3107

SEQUENCE LENGTH:58

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03652

SEQUENCE DESCRIPTION:

GATCTGTCTG GCTCCTTGT TTCTTATTAA ATAAATTTCT GTCTTCTATT GTTTCAAA 58

SEQ ID NO:3108

SEQUENCE LENGTH:58

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03653

SEQUENCE DESCRIPTION:

GATCAGCCTT NNTATAATGT TTTTAAATC ATTTCTAAAT AAAACAGAAA TACAGAAA 58

SEQ ID NO:3109

SEQUENCE LENGTH:55

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03654

SEQUENCE DESCRIPTION:

GATCTAGACT TATATGAATA AATNAAATTA CATGCCAAGG GCCCTAAAAA GCAAA 55

SEQ ID NO:3110

SEQUENCE LENGTH:53

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03655

EP 0 679 716 A1

SEQUENCE DESCRIPTION:

GATCAGGGCC GAGCAGAACC GCACTCTTCC CAAATAAAGC TTCCTCCTTG AAA 53

5

SEQ ID NO:3111

SEQUENCE LENGTH:55

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03659

10

SEQUENCE DESCRIPTION:

GATCATATTT TTTNATACAG GTATTTCAAT TAAAATGTTT TTGTACATAG TGAAA 55

15

SEQ ID NO:3112

SEQUENCE LENGTH:76

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03661

20

SEQUENCE DESCRIPTION:

GATCCAATCA NTTAAATAAA CCTGTATGTA TATGCATATG TNTACATGCA TATCCCCTCC 60  
TGCTAAAACAT CATAAA 76

25

SEQ ID NO:3113

SEQUENCE LENGTH:451

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03679

30

SEQUENCE DESCRIPTION:

GATCCCTCAG TTTCTTCTTG ATTTCAGCAT GTNTCGGGTT CCTAATTTAT GGTATGAGTT 60  
AGCAAAATTTA ACCATTGTGT TTGTGCCCTA CCCAGGGGAC TCCCCAGTTT CTGACTTGAA 120  
GTAGACTGAG AAGAATCCAC GAGGTGCTAT CTGGCCAGAT TTAAGTAGAT TCTATTTCCT 180  
TGGTTCTCCC TCTCCCTGAG GACCTCTTAT TTNATTGTCC CCTCTTCTAG GTTAATTCTC 240  
CTTTGATTG ACTTTGTTGA GAAGGAGGTT GGACAGTAGA TTAGCAAAGT TCCAAGTGCA 300  
AAATTACAGT GTGTTAGAGT GTGGGGGGAA AATTAGTCTT ATTTTCCCT ACATGGGATA 360  
CAACACTGTG AATTCAATCT TCAACCTGAA GGGCCCTGCA GTTCCTCCTA AACATNGTT 420  
GTTTGNTTTT CTTTAACCAA GGTTTAAGCT N 451

40

SEQ ID NO:3114

SEQUENCE LENGTH:445

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

45

CLONE:HUMGS03680

SEQUENCE DESCRIPTION:

GATCTAAGGA TGACTTGGAC ACACTCCNTG GCACTGAAGA GTCTGAACAN TGGCCTGTNA 60  
TTGGTCCATT CCAGGACCTT CATTTCGATA AGGTATCAAA CCACANCAGC CTCTGATTGG 120  
CCATGGGCAG ACCTGCACTN TGGCCAATNA TTGGTTCATT CCAGGACATT CATTTCGATA 180  
AGGAGTCAAA CCACANCAGT CTTGGATTGG CTGTGAGCCA ATTCACCTCA GTCTCTAATT 240

50

55

GGC>NNNAGT CAGTCTTTCA TTTACATAGG GTGTAACCAT CAAGAAACCT CTACAGGGTA 300  
 CTTAAGCCCC AGAAGATTTT NCTACCAGGG CTCTTGAGCN ACTTGCTCTA GCCCACTCCC 360  
 ACCCTGTGGA ATGTNCTTTC ANCTTTTGNT TGGTTTCAAG TNCCTTGGTG CTTCCAATAA 420  
 NTNCCACTTC CTTACCACC CNAAA 445

SEQ ID NO:3115

SEQUENCE LENGTH:439

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03681

SEQUENCE DESCRIPTION:

GATCGGCGCC ACTGCTGTCC TGCTGGCTTC NNCTGCGCAG CANGGGGTAC CAAGTGTTN 60  
 CCCAGGGAGG CCCCGCGCTG GGACGCCCCCT TTAAGGGACC CAGCCTTGAN ACAGCTGCTG 120  
 TAAGGGACAG TACTGAAGAC TCTGCAGCCC TCGGNACCCC ACTCGGAGGG TGCCCTCTGC 180  
 TCAGGCCTCC CTAGCACCTC CCCCTAACCA AATTNTCCCT GGACCCCAT TCTNAGCTCCC 240  
 CATCACCATG GGAGGTGGGG CCTCAATCTA AGGCCCTCCC TGTAGAAGG GGGTTGTGGC 300  
 AAAAGCCACA TTACAAGCTG CCATCCCCTC CCGTTTNAG TGGACCCTGT GGCCAGGTGC 360  
 TTTTCCTAT CCACAGGGGT GTTTTGTGTG TGTGCGCTG GTGCGGTTN AATAAANGTT 420  
 TGTACAACTT NTGTTTAAA 439

SEQ ID NO:3116

SEQUENCE LENGTH:431

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03682

SEQUENCE DESCRIPTION:

GATCTTGAAG TGCTTTTAT ACAGCTCTCT AATAATTACA AATATCCGAA AGTCATTCT 60  
 TGGAACACAA GTGGAGTATG NNAATNNN TATGAATTT TCAGATTATC TAAGCTTGCA 120  
 GGTTTTATAA TTAGAAGATA ATGTGAGANT TAATGGGGT TATATTACA TTATCTCTCA 180  
 ACTATGTAGC NCATATTACT CACCCTATGA GTGAATCTGG AATTGCTTT CATGTGAAAT 240  
 CATTGTGGTC TATGAGTTA CAATACTGCA AACTGTGTTA TTTATCTAA TCCATTGCTT 300  
 AATGAGTGTG TTTTCCATG ATTGAATATA CCGTGGTTCA TATGTTAGCA TGGCAGCATT 360  
 TTCAGNTAGC TTTTGGTTT GTTGGGAAGT TGGGGTTTG GGGGGAGGGG GGAGTNTNG 420  
 TACGTTGCCT N 431

SEQ ID NO:3117

SEQUENCE LENGTH:427

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03683

SEQUENCE DESCRIPTION:

GATCAAAGTA TTATATGCTG TGTGCTTTTA AGGTGTTTGT AAGTACTGAA AAAGGCAAAA 60  
 ATNCTTTCTA CATTGACATT CATTCTATT TNACTGGGCA CCTATGAATG TATGCTGTGT 120  
 GCTAGAAAATA GACTAAAACA TATTCCTATA GCATGTNAGT GTGTTTGCAT GTTTGCTGAA 180  
 AATCCTTTGT GTATAANCCA GTTTGTAAGG TTCTCTGGGT TAGGTAGGA CTCTGCAGTT 240

EP 0 679 716 A1

TCTNCCTGTC NAAATCTCTC CTACCAAGAT GGTGTTCCAC TGTCCAGCCC AGCATGAGTA 300  
GCAGGTAGNG CACAGCTTTA CTGGCTGGTT TGTATGCTTT GGTTTTAGGT GCAATTGTTG 360  
TGGGTNGATT TACTTTNTCC AGAAAACCAT NGTATTGNNN ATGTCCTNGG ACCGGTGGAA 420  
AATAGGN 427

SEQ ID NO:3118  
SEQUENCE LENGTH:423  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03684

SEQUENCE DESCRIPTION:  
GATCAAAAAT ATTAGAAAAA ATAAAANTAA TACAAATAAA AATACAGTAT AACAGTTATT 60  
TAAATAGCAT TTACATTGCA TTAGGTATTA GTCTAGGGAT AAAGTATACA GCGCGATGTN 120  
CGTTGGTTAT ATACAAATAT GTCATTTTAT GNAANNGACT TGAGTATACT TGGNTTTTNG 180  
GTATCTNTGG GTTGGGGGGA CGGTCCAGGA ACCAATACCC CATGGATACC AAGGGACAAC 240  
TGACTTATT TNCNTTATT GTCATTGCAA GCTTCTTATG GAACTTTAT AGGGAATGAN 300  
AATATACATG TTAAGGANGA TTAACATTA GATAGTAGAT GGTGTGTTGC ATGCTAGAAC 360  
TGTTAGTATT GTTGATTCAA TTACTTTGGT TTCATGAAAA ANTAACGGT AANTATCTTT 420  
AAA 423

SEQ ID NO:3119  
SEQUENCE LENGTH:421  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03685

SEQUENCE DESCRIPTION:  
GATCGAGACC ATCCTGGCCA ACATGGTGAA AACTCATCTT TACTAAAATA CAAAAAATTA 60  
GCCACGCNTG GTGGCGCAGC TTGTGGTCCC AGCTACTCGG GAGGCTGAGG CAGTGGAGTC 120  
ACTTGAACCC GGGAGGCAGA GGTGTCAGTG AGCCGAGATT GCACCACTGT ACTCCAGCCT 180  
GGCGACAGAG CAAGATTCTN TNTGCCCCC CACCAAAAAA AAAGANTGAA ACACTGATAT 240  
TTGCTACAAC ATGGNTATAC CTCCAAAGCA TCCTGTTAAG TGAAAAACAGG GAGACACAGT 300  
CACGTACTAT ATGATTGCNC TTACGTGAAA TATCCACANN GACGNNTCCA TGGNGACCAG 360  
GCAGATTGCC GNTTGCCAGA GGCCAAGGGT TAGGGAAAAA TTGGTGAGGG ACCCTGCGTG 420  
N 421

SEQ ID NO:3120  
SEQUENCE LENGTH:410  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03686

SEQUENCE DESCRIPTION:  
GATCTATGAC TTCTCAAAGC CGGGTCATGA ATGTCCATAA AATGCTAGGC ATTCCTATTT 60  
CCAATATTTT NATGGTTGGA AATAATGCTT CANATTGGA ACTGGACCCC ATGAAGGATA 120  
TTCTCATCCT CTCTGCACTG AGGCAGATGC TGCGGGCTGC AGATGATTTT TTAGAAGATT 180  
TGCCTCTNGA GGAAACTGGT GCAATTGAGA GAGCGTTACA GCCCTGCATT TGAGATAAGT 240



TGCCTTGATT CTGACATTG GNCCAGCCTG TACTGGTGTG CCGCAATGAG AGTCAATCTC 300  
 TATTGACAGC CTGNTTCAGA TTTNNCTTTN GTNCGTTTNN CNTTCTGTCC TTGGACCAGT 360  
 CATATCTCAN GTTCCAAAGG CCANAACCTT GAGGAGCGGT NNGGCTAAGN 410

SEQ ID NO:3121

SEQUENCE LENGTH:402

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03688

SEQUENCE DESCRIPTION:

GATCTGAGGA CCCTGTACTG GTTACTCCTG TACACGTTC CAATTTTCNT GTAAATNTAT 60  
 TAATATACTG AGCAGTCCAG GAGCAGCCAT TAGGCAAACA CCACTCCTTG CTCCTTCAT 120  
 GTGACCTATC ACTGAGCTCA CCAGCTGAGG TCAATNACAT TCTCCCAAC CTGGAGAACA 180  
 GAATTTGGGT CTGCTCAGAG GCATGATGTG AAACATGTCT GGGATAAAG CTTGTCTTA 240  
 TTGACAGCAA ACCTTTTGT GTTAAGGGGT AGGGGAAGAG CANGTGAAG ATGCAGATTA 300  
 ATTTCTATTT AGGANTATAC TTTTNTATAT NGTTTGAAAT TTTGGNCTTG TAAAAATATT 360  
 CATCCATNTT TTNACCAANA NAATTCCTT GTGGACNGGT TN 402

SEQ ID NO:3122

SEQUENCE LENGTH:409

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03689

SEQUENCE DESCRIPTION:

GATCAGTTTG ATTCTGTAAT GAGCACAGCA CCTAATATTT TGAGGAGCTC TGTTTTGAGG 60  
 ACCAATGCTT AAGGTGGACT TTGTTCTGTA ACAATATCCC AATAGATTTG TTGACTTGAG 120  
 GTCTGGTTTG GTTTTGT TTTTGT TTTTGT TTTTGT TTTTCCAAT AGAATTAAGA 180  
 ATTCTAATGT TGAAAACTG CACAAATTTT TATGGGACAA AGCCTAGAAA AGAGAAATGT 240  
 AGTTTGAATC ATAATCTAAA TCATCGTATG ATAGANGAGG GAAAGTTTTG GTGCCATAAT 300  
 TTCTCCTTTC ACTGGTGTG GGNCTTAAAT CAAGTTGAAA TGTATTCTG TACCACAATT 360  
 TTANGGCTTT CAATAAAAAG TTTTAAATNG TCTAGGTGAC CATTCCAAA 409

SEQ ID NO:3123

SEQUENCE LENGTH:400

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03690

SEQUENCE DESCRIPTION:

GATCAACATC CACAGCGAGA CCTCCGTGCC CGACCATGTC GTCTGGTCCC TGTTC AACAC 60  
 CCTCTTCTTG AACTGGTGCT GTCTGGGCTT CATAGCATTC GCCTACTCCG TGAAGTCTAG 120  
 GGACAGGAAG ATGGTTGGCG ACGTGACCGG GGCCAGGCC TATGCCTCCA CCGCCAAGTG 180  
 CCTGAACATC TGGGCCCTGA TTCTGGGCAT CCTCATGACC ATTGGATTCA TCCTGTTACT 240  
 GGTATTCGGC TCTGTGACAG TCTACCATAT TATGTTACAG ATAATACAGG AAAAACGGGG 300  
 TTAGTAGTAG CNGNCCATAG CCTGCAACCT TTTGNACTTC ACTTGTGCAA TGCTTGGCCC 360  
 TGNACGNTGG GGCTGTTGCC CTTGCCCCNT TTGGTCCTGN 400

SEQ ID NO:3124

SEQUENCE LENGTH:400

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03691

SEQUENCE DESCRIPTION:

GATCCTTCCT ACTTTGCTTC TNTCCACCCA TGACCTTTTT NACTGTGGCC ATCAGGACTT 60  
 TCCCTGACAG CTGTGTACTC TTAGGCTAAG AGATGTGACT ACAGCCTGCC CCTGACTGTG 120  
 TTGTCCAGG GCTGATGNTG TACAGGTACA GGCTGGAGAT TTNACATAG GTTAGATTCT 180  
 CATTACGGG GNNGGTTAGC TTAAAGCACC CTAGAGGACT AGGGTAATCT GACTTCTCAC 240  
 TTCCTAAGTT CCCTTCTATA TCCTCAAGGT AGAAATGTCT ATGTTTTCTA CTCCAATTCA 300  
 TAAATCTATT CATAAGTCTT TTGGTACAAG TTTACCATGN TAAAAAGGAA ATGTGATTTT 360  
 GGCTTCCCC NTCTTTTGCA CTTTTTGAA ATANAGGGTN 400

SEQ ID NO:3125

SEQUENCE LENGTH:397

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03693

SEQUENCE DESCRIPTION:

GATCCTNAAT TTNAAAAATTT NACACCATCA TAAATNAACA AAGGTAGGAA GGAGTTTGGC 60  
 TTCAATAGCT TACAGTAAAA GGAGTAAAGG AGTTCAGCCT CAAAACGATA TTGTTGACCT 120  
 GTNATGTTAT GAAAAATAAT CCAGTGTTTA TACTTAACGG ATGCCATCCC TTATNATTTA 180  
 CTATTTTCTT AGTCTAACTA AACAATCTTT ATTAAAAATA GCAATGATAT TTGACATGGG 240  
 CCTAAGAAAT ATATAGTTAG CTAACAATAT TGTCAGTTAG AGGGATTCTT TTTCTAAATT 300  
 AAGTACAGAT TTCTTCACCA AACTCCAGGN TAACAGAAAN GGGGCCATAA AATTTGGNCC 360  
 ATAGTTTCTG GGTTAAATAA NTGGTAATTT TAAANTN 397

SEQ ID NO:3126

SEQUENCE LENGTH:392

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03694

SEQUENCE DESCRIPTION:

GATCAAGTAA CATGTTGCAT GTGGCTTACT CTGGATATAT CTAAGCCCNT CTGCACATCT 60  
 AAACCTAGAT GGAGTTGGTC AAATNAGGGA ACATCTGGNT TATGCCTTTT TNAAAGTAGT 120  
 TTTNTTTAGG AACTGTCAGC ATGTNGTNGT TGAAGTGTGG AGTTGTAAC NTGCGTGGAC 180  
 TATGGACAGT CAACAATATG TACTTAAAAG TTGCACTATT GCAAAACGGG TGTATTATCC 240  
 AGGTACTCGT ACATATTTT TTNGTACTGC TGGTCCTGTA CCAGAAACAT TTNCTTTNAT 300  
 NGTNACTNGC TTTTNAACCT TTGTTAGCC ACTTAAATC TGCTTATGGC ACAATTNGCC 360  
 TCAAAANTCCC ATTCCANGT NGGTAATATT GN 392

SEQ ID NO:3127

SEQUENCE LENGTH:391

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03695

SEQUENCE DESCRIPTION:

5 GATCTAAGGA TGA CT TGGAC A CACTCCCTG GCACTGAAGA GTCTGAACAC TGGCCTGTNA 60  
 TTGGTCCATT CCAGGACCTT CATTGCATA AGGTATCAAA CCACATCAGC CTCTGATTGG 120  
 CCATGGGCCA GACCTGCACT CTGGCCAATN ATTGGTTCAT TCCAGGACAT TCATTGTCAT 180  
 AAGNGTCAA ACCACAGCAG TCTTGGATTG GCTGTGAGCC AATTCACCTC AGTNTCTAAT 240  
 10 TGGCTGTGAG TCAGTCTTTC ATTTACATAG GGTGTAACCA TCAGGAANCC TCTACAGGGT 300  
 ACTTAAGCCC CAGGATGATT TTGGCTTACC CGGGNGTTTC TTGNGGCCNC TTTGGTNTTG 360  
 GCCNAGTTNC NCACCTTGT GGAATTGGT N 391

15 SEQ ID NO:3128

SEQUENCE LENGTH:389

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03696

20 SEQUENCE DESCRIPTION:

GATCTCGGCT CACTGCAACC TCCACCTCCC GGGTTCAAGC GATTCTCCTN CCTCAGCCTC 60  
 CTGAGTATCT GGGATTACAG GCGTGACCA CCATGCCTGG CTAAGTTTG TGT TTTTTT 120  
 AGTAGAGATG GGT TTTCAAC ATATTGGTCA GGCTGGTCTC GAACTCCTGA CCTTGTGATA 180  
 25 CACCTGGCCT CAGCCTCCCA AAGGNNNGT GCCACCGCGC CTGGCCCAT TTTCTTTTT 240  
 TTGACCCATA CTTAATGTTG CAGAACTAT TCTTGTGATA ACATTATCTC TCATGTACAG 300  
 TAATTATATG TAAATTAATT GAAGCAAATN TGGGAACTT TACAATAGAA ATAAAGNTAG 360  
 GCAGCCAGCG TGTGTTCCA NTTNTNAAA 389

30 SEQ ID NO:3129

SEQUENCE LENGTH:380

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

35 CLONE:HUMGS03697

SEQUENCE DESCRIPTION:

GATCTCGGCT CACTGCAACC TCCACCTCCC GGGTTCAAGC ATTCTCCTG TCTCGGCCTC 60  
 CCGAGTAGCT GGGATTACAG GCGTGAGCAC CATGCCCAGC CAGAAGTACT ATNATTTCTT 120  
 ATA ACTACAT ATGAATCTAA AATTATCACA AAAGGAACT TCTTTAAGA AAAAGAAAAG 180  
 40 AATCAGAACA TAAATATACA GCATGGCAAA ACTACATCTA AAACAAGTAT TATAGGTCTC 240  
 ATGGTGGAAA ANTTGGACCC ACAAGAAAAG TTGTTAATTA TCTCTGATAT TCTGAACCAT 300  
 TGNTATCTGC AAAATGATTA CTAGGTATGT GCAATGANGG CTATTGATGT TACCCTGTAT 360  
 ATCTGCACAC TGTGTTCCAN 380

45 SEQ ID NO:3130

SEQUENCE LENGTH:352

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

50 CLONE:HUMGS03698

# EP 0 679 716 A1

## SEQUENCE DESCRIPTION:

GATCTGCTAG TGCTGTAATA TTGTAATAC TGGACTCAGG AACTTTTGTT AGGAAAAAAT 60  
 TGAAGAAGT TAAGTCTCGA ATGTAATTGG AATCTTCACC TCAGAGTGGG GTNNNNNCTG 120  
 CTATAGCCTA AGCGGCTGTT TACTGCTTTT CATTAGCAGT TGCTCACATG TCTTTGGGTG 180  
 GGGGNGNGAN GANGAATTGG CCATCTTAAA AAGCGGGTAA AAAACCTGGG TTAGGGTGTG 240  
 TGTTCACCTT CAAAATGTTC TATTTAACAA CTGGGTCATG TGCATCTGGT GTAGGAAGTT 300  
 TTTTCTACCA TAAGTGACAC CAATAAATGT TTGTTATTTA CACTAGTCTA AA 352

SEQ ID NO:3131

SEQUENCE LENGTH:375

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03699

## SEQUENCE DESCRIPTION:

GATCGTGGGT TGCCGAGAGG ACCTGAGCGC TCGGGCTCTG CTGAATGGAN CCGGGTCCCT 60  
 CAGGCCGTGG ACGCCCTCGG AAGGGGGGTG ACTGTGGCTT GTNTCTGGAC AGGAATGTGT 120  
 CATTTCACAC ATCTTCTAGA GGGCTGCCAG CTGGGAAGAC AGTTATNAGG GCAAGCTGTG 180  
 CTCTGAGTTT CGGGTCTGTC TCCTACAAAG AACGTGCGGT GCTGCGGGCN AGGGCCCCGG 240  
 CACGGACAAG GGCCACTGCA GAGTGTGTTT CTNCTCGTNA GCTGCCCTGG GCANGGAATG 300  
 GGCTGGTNA TGCAGTTGGA TGCACATCTN ATTCTGTCAT GAATGTCCAG TAAAAAATCT 360  
 GAAATTGGTT GCAAA 375

SEQ ID NO:3132

SEQUENCE LENGTH:369

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03701

## SEQUENCE DESCRIPTION:

GATCCAACCC AAGGGCAAGG GCATCCTGGG AAATACCATC AAGTGGAAT TCACCAAGTN 60  
 CCTCATNGAC AAGAACGGCT GCGTGGTGAA GCGCTACGGA CCCATGGAGG AGCCCCTGGT 120  
 GATAGAGAAG NACCTGCCCC ACTATTCTA GCTCCACAAG TGTGTGGNCC CGCCCGAGCC 180  
 CCTGCCCACG CCCTTGGAGC CTTCACCGG CACTCATNAC GGCCTGCCTG CAAACCTGCT 240  
 GGTGGGBCAG ACCCGAAAAT CCAGCGTGCA CCCC GCCGGA GGAAGGTCCC ATGGCCTGCT 300  
 GGGNTTGGCT CGGCGCNCCC ACCCCTGGCT ACCTTGTGGG AATAAACAGA CAAATTAGCC 360  
 TGCTGGAAA 369

SEQ ID NO:3133

SEQUENCE LENGTH:367

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03702

## SEQUENCE DESCRIPTION:

GATCTTGGGA AAATTGCGGA GTGTACATTT ACAAAGATGC GTTCAAATAG TGCTCTAAGA 60  
 GTTTTGTTC GTGGCTCACT TCGGCTAAAA TGCAGAAATG NATGCTGTCA GCGTTGGTAT 120  
 TTCACATTCA ATGGAGCTGA ATGTTACGGA CCTCTTCCCA TTGAAGCTAT AATTTATTTG 180

5 GACCAAGGAA GCCCTGAAAT GAATTCAACA ATTAATATTC ATCGCACTTC TTCTGTGGAA 240  
 GGACTTTGTG AAGGAATTGG TGCTGGATTA GTGGATGTTG CTATCTGGGT TGGTACTTGT 300  
 TCAGATTACC CAAAAGGAGA TGCTTCTACT GGATGGAATT CAGTTTCTCG CATCATTATT 360  
 TGAAGAN 367

10 SEQ ID NO:3134  
 SEQUENCE LENGTH:366  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS03703  
 SEQUENCE DESCRIPTION:  
 15 GATCAAGAAA TGCATTGACA TTCTAATTGA GAAAGAATAT TTGGAGCGAG TGGATGGTGA 60  
 AAAGGACACC TACAGTTACT TGGCTTAACC CTTCTGGAAG GGTCTGACTG TGTGACCCGC 120  
 AGCAAATAGT TCATGTTGGA AAGAATGAAA ACAACTCAAG TTCATAGCAG CCAGCCTGCC 180  
 GCCATTGGAC CTCCTTTTA AAAACTGAGA CCAAGACTCC CATCAGCTGG TCTCGGGTTT 240  
 ACATCGGAAC TGCTCAGGAT TGATACATTT NAAGTCTGTA AATACGGACA CCAACGCCAT 300  
 TTACCCTAAT TTNANGAACA GCGGGGNCCTG TCCNTCCGGT GCCGAGGGGC TTGCATTGCT 360  
 TACCGN 366

25 SEQ ID NO:3135  
 SEQUENCE LENGTH:364  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS03704  
 SEQUENCE DESCRIPTION:  
 30 GATCCCTGAT TAAGCTGATG ACTAGACCTA CAATTAATTT TCCTGCAGTA TATGAAGTAT 60  
 TGTACCAGAG TATTAAAAGA TATGTAATAT TTNATTGATA AATCTATCCT TTAAGGAA 120  
 TACGTTTTAG GATGTCATCA TTTTGATGTG AATCATGTAA ATGTTGATAA TATGCTGTTT 180  
 ATTATACATT TAGTGTTC AAGAGATTCAC TTAATTGCCT TTTTCCCCAC GTATATTATG 240  
 TAGTCTATTT GCAACTGTTT TTAATAAANT GNCATTAAAG GACTAGTTTA TGTNGGGAAC 300  
 CATTAGTGGN TGTTATTNGN CTCCTCCCT NTNTTTTGG GGTGTTAGCG CACCTGCTTT 360  
 GCTN 364

40 SEQ ID NO:3136  
 SEQUENCE LENGTH:363  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS03705  
 SEQUENCE DESCRIPTION:  
 45 GATCCTGACC AGCAAGCCCC CCCCCAGCCC CCCTTCCAAG TGAATCCGTG NCTTGAGTGT 60  
 GTCTGCGTGT TTACACCCGT CCCTCTGCTG GCCGCCCCG TGCAGCGGC ACCCTGCCC 120  
 TGCCCTCCAC AGAATTGGGT TCCAAGGGCT GTTCCAGACA ACTGCCAAG TCACTGAGGG 180  
 CCCTGCCCCA GCGGNCCTGG CCCCAGGGTC TATTAACTA AAATGTAGCT CCCTAGCGNT 240  
 AACCTAGGAA CCGGCGTTGN CTGCTTGGGG GGTACGCCC TCATGNCCTT GTTCCAGGG 300  
 50 CCGGGGGCCT TNAAGCGGTG NGAACAATTC NTTGGCTTT TTTCANANTG TTTAATNGGA 360

55

ATN

363

SEQ ID NO:3137

SEQUENCE LENGTH:359

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03707

SEQUENCE DESCRIPTION:

GATCTGGTGG TCAGCCCTAG GATAAAAAGC CAGGGCTGGA GAACAAGAAA GGGCCAGGAG 60  
ATGGAATTCC TTCAGGCCGG CACCCACACC CTAGGACATG TAAGCCCTCA TGTCGAAGGG 120  
AGCCTCATGC AGATAGTAGG AAATCAGGTC TGGAAATTAA AAANTAAAAG GCATGAGACT 180  
AAGGCTATCT GCTTCCNTTA TGCCCTGACT GGAGAGGGGA GGGTGGAGAG GCANGGCCCA 240  
CAGTGGGCAT CCCNGCTNGG TCTTNGGATG NCTGCNGTGN GGTGAATTCC CGGGAACTNG 300  
TTTGGGCACA ANGNTNNTT TTGGCACTTT GTTTTTTTTG GTATTAAAG GTTTTGCTN 359

SEQ ID NO:3138

SEQUENCE LENGTH:358

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03708

SEQUENCE DESCRIPTION:

GATCAGGGGA TAGTGAAGTT TACCAACTGG GTGATGTCAG TCAAAAGACA ACATGGCACA 60  
GAATATCAGT ATTCCGGCCA GGCCTCAGAG ACGTGGCATA TCAATATGTG AAAAAGGGGT 120  
CTCGAATTAA TTTGGAAGGG AAAATAGACT ATGGTGAATA CATGGATAAA AATAATGTGA 180  
GGCGACAAGC AACAACAATC ATAGCTGATA ATATTATATT TCTGAGTGAC CAGACGNAAG 240  
AGAAGGAGTA GAAAGGATGA TTCTTCTTTG GCCATCATTI GGTACAGTCT CATTTCCAAG 300  
TCATGTATAA TCTTTATGGC TTCCAGGGAC ANGGNTTTAA AATACTCTTT TACGTAAA 358

SEQ ID NO:3139

SEQUENCE LENGTH:356

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03709

SEQUENCE DESCRIPTION:

GATCTCAGTC TCTCTGTCTC TCTTCTCTC CTTTCTCTT TGGTGTATCA AATATTTNAT 60  
TGACAAAGTA AGGGCCTTGA TTAGGACCAA ATTCTCGTGT GTTGCTATGG TCTTTATTAA 120  
GGACAACAAT TAACAATGCA GTGGCCCATC CTTGTCACTC TACACATATG ACTATACGGG 180  
ACATATGTAA TATATAAATA TATATATAAA NCATTCCCCT CTGTCCCCTT GGCTTCGGAT 240  
GGAGGCCTTT CTGTTGAGCT GAAATGCACC TGCAGCTGGG TGCTGCCAGC AGCTTGCAGG 300  
CCCCAGCCCT GTTCCANTCA ATGCAGTTGN CAATAANTGG NATGAGTATC GTCAAA 356

SEQ ID NO:3140

SEQUENCE LENGTH:354

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03710

SEQUENCE DESCRIPTION:

5 GATCTTCAGC ATGTGCGGCC TCATGCTTAA GCTGAAGTGG TGTGCTTGGG TCGCTGTCTA 60  
 CTGCTCCTTC ATCAGCTTTG CCAACTCTCG GAGCTCGGAG GACACGAAGC AAATAATGAG 120  
 TAGCTTCATG CTGTCCATCT CTGCCGTGGT GATGTCTAT CTGCAGAATC CTCAGCCCAT 180  
 GACGCCCCCA TGGTGATACC AGCCTAGAAG GGTACATTT TGGACCCTGT CTATCCACTA 240  
 GGCCCTGGGCT TTGGCTGCTA AACCTGCTGC CTTAGCTGC CATCCTGGAC TTCCCTGAAT 300  
 10 NAGGCCGTCT CGGTGCCCC AGCTGGGATA GAGGGAACCT GGGCCCTTTT NCTN 354

SEQ ID NO:3141

SEQUENCE LENGTH:352

SEQUENCE TYPE:nucleic acid

15 TOPOLOGY:linear

CLONE:HUMGS03711

SEQUENCE DESCRIPTION:

20 GATCTTGATG AGGGCCAACCT TTCCCTCTTC CACAAGGGAT TAATCTTAGA ACTATAGCCA 60  
 ATTTATTATA AGTACTATTT AGCTACTCTG TGCTCCACAC ATCACGGAGT AATATCTTCA 120  
 AACTATGAGG TTTAGTAACA CTTGACTGCT GAGGTTTATT TCCTCAGCTC TGATGCTTCC 180  
 TGGGTGAAGA TGTAAGTNAT TAAATTAAC TAAATTTAA AGCTAACACT TCATTCCATC 240  
 TAGACCAGGT AGCTCGTCAT TTGTACGTCT GATAGGTGCT TCAACATCTC AGAATTGGCT 300  
 TTATTTTCA TGCAATGCAT ATTGTACTCN TTGTAATAT TGGGNATGTA AN 352

25 SEQ ID NO:3142

SEQUENCE LENGTH:349

SEQUENCE TYPE:nucleic acid

30 TOPOLOGY:linear

CLONE:HUMGS03712

SEQUENCE DESCRIPTION:

35 GATCTGACCA CTGTTCTCCA GCAGGCCTCT GCTGCAGCTT TTNCTCTCAG TGTCTGGCC 60  
 CTCTCCTCTC TTGAAAGTTC TCTGCTTACT TTGGTTTTC CTCTGCTTGT AAAACATTGA 120  
 GTCCCTCCCT TGCCTTGGTT AATTGACTCA CACCAGCTGT GCGATGCCCC CTTTACAAT 180  
 TAAAGGAAAA CTGTTTGTGTT CAGTGTCACT TTGTCAGCAA CACTGTGTCC CTTGCCCCCA 240  
 CCGTTCTTCT CTGCTGCATT TGGACATGAG CCAAATTTGA ACCCAATCAA ATATAACGTG 300  
 TCTGACACTG ATTTGTNTT TACTCAANTA AANGTATAGA CTACAGAAA 349

40 SEQ ID NO:3143

SEQUENCE LENGTH:348

SEQUENCE TYPE:nucleic acid

45 TOPOLOGY:linear

CLONE:HUMGS03713

SEQUENCE DESCRIPTION:

50 GATCTGTTCC AGCTGCAGGT GAACACCCTA CGACGTTATA AACGACACTA ACAAGTTGCA 60  
 GACCAGACCA GGCTTCAATA AGGCCAGTT AGCAGAACT GTGAGTCGAC ACTTCAGGAA 120  
 CATACCTGTG AATGAAAAAG AGACCCTTGC CTACTTCATC TACATGGTGA AGAGTAACAA 180  
 GAGTAGACTG GACCAGAAAT CGGAGGGNGG CAAGCAGCTT NAGTGAGGAT GAAGCACATC 240

55

EP 0 679 716 A1

TTAAAGGAAT GAAGTGTAAG TGCTTGATGC ACAGGTNGAT ATCTACTACA TTAAAGCCCA 300  
TAAAGACTGT TTAAATATTA TTGTAAATAA AAAAGTTTGT ATGATTGN 348

5 SEQ ID NO:3144  
SEQUENCE LENGTH:348  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
10 CLONE:HUMGS03714

SEQUENCE DESCRIPTION:

GATCCAGATG CAGAGGCCAG GATGTGGGCC CAGCCCTGTG CCAGGAGGCT NGCTGGAATA 60  
AAGGGATGGG CAGGCTGGCA TGGGGGCAGC CGCTGCCCTT GCCTNNNTGT TGCTGTGTAT 120  
TCCTGCCGGC CAGGGGCCAC TGCCAGGACC ACGCCTCCCT TTTNATATCC CGATTCTTAA 180  
15 GTTCTGTAT TGTTGTTATC TGGTGGAGAA AAAAGAACCG CGTGGCTGTT TTTNAACTGC 240  
CTGGAACCTA AGACCCTGAA TTCTTTTCCC CCCCAAGGGG AAAATCTATA TGGAAAACAT 300  
TTATTTTAAA ATACAGGATG AAGTGAATTA AAAGATTTTA AATGCAAA 348

20 SEQ ID NO:3145  
SEQUENCE LENGTH:379  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03715

SEQUENCE DESCRIPTION:

GATCACACCT GAGCTTATGC TAAAAGGTGG GATGACTCAG AGCTGGGGCT GGTCACCAGA 60  
CAGACTGACC ATGTGATTAG AGGTTTGAGG CTTTGAGTCA GCCTGACCTA TGGGGCGGGG 120  
GACTGGAGGC TGAGTTTAAAT CATCTGGCCA GTGCTTTAAT CAGTACATCA TGAAACCCTA 180  
30 ATAAAACTC TGGACACTAA AGCTCAGCAT AGCTTCCTGG GTGGTGAAGC TGTGGCTATG 240  
CCGGCAGGGC AGTGTGCCCT AATTCACGA AGAGGGGGCA TGGGAGCACT GTGCTCAAGA 300  
CCCTTCCAGA CCTTCCCTG TGTCTTCCTT GGCTTGTGGA GCTGATTGT ATCCTTTATA 360  
ATAAACCTAA TCATAAGGN 379

35 SEQ ID NO:3146  
SEQUENCE LENGTH:371  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03716

SEQUENCE DESCRIPTION:

GATCTGACCT GTGACAAGTC TGTACTATCC ACTATGTAAG TGGCTCACAA GTCAATTGCA 60  
AACAAAGTGA ATGTACAAAT CTTAGTGCTG GTGCTGAAAT CTCTTCAGAA TAGTNATCAT 120  
GATTTAAAG TTTGTTTAA AATTGCAAG CATCAAGTGT CAATCAAAAC TGAAGATGAA 180  
45 AACTAATGA ATGTTGAATT CTCATGCTTT TAGGTGTACT TCCTTTTTAG AATTTTCAGT 240  
TTTCTGCTAT TTTTACCGTA ACTATTCGT TTAANTTGG TTTTATTAN GTTTCCTACA 300  
TGCTAACTTC GTTGTGCGN TTGANTAAAN TTGCCGGTAT ATATNTGGTG GCCTTGTTTG 360  
TGACACTTTG N 371

50 SEQ ID NO:3147

55



SEQUENCE LENGTH:346

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03717

SEQUENCE DESCRIPTION:

GATCACAGGC AAACCCATCA AGCTGACTCA GGTGGAACAC GAAGCTGGCA NNTAAGTGGG 60  
 ACATGGATGG GGCAGGAACC ACCCCAGCC CAGGGCTGCA GCCTNNCCCA CCTNACCTTC 120  
 CCGCTGGACT ATNACCTTAA CCAGCCTTNN ATCTTCGTAC TGAGGGACAC AGACACAGGG 180  
 GCCCTTCTTT TCATTGGCAA GATTCTGGAC CCCAGGGGCC CCTAATATCC CAGTTTAATA 240  
 TTCCAATACC CTAGAAGAAA ACCCGAGGGA CAGCAGATTC CACAGGACAC GAAGGCTTGC 300  
 CCCTGTAAGG TTTCAATGCA TACANTAAAA GAGCTTTATC CCTAAA 346

SEQ ID NO:3148

SEQUENCE LENGTH:344

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03718

SEQUENCE DESCRIPTION:

GATCTNCTGC CGAGTGAATG GGGAAAGTNT CCAGAGCGGC AACACCAAAT AGATGGTATT 60  
 CAAGACAGAG GACCTGATAG CCTGGGTCTC CCAGTTTNTN ACCTTNACC CAGGGGATGT 120  
 NATCCTAACT GGGACCCCCC CAGGTGTCGG TGTATTCAGG AAACCTCCTG TTTTNTCAA 180  
 GAAGGGGGAT GAAGTCCAGT GTGAGATTGA NGAAGTAGGT GTNATCATCA ACAAGGTGGT 240  
 GTGATGGCTC CTGCACAGGC CCTGCACATA GGTGAGGGC ATCTGCTCCC ACTNAGCCTA 300  
 GCCCAGGGAA AGGCCANTG ACAGGNTGTG GACAGGTTGC CAGN 344

SEQ ID NO:3149

SEQUENCE LENGTH:341

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03719

SEQUENCE DESCRIPTION:

GATCTTTGAA GTCTATTTAA ATATTCATTC CATTACATCT AGACTCACCN AGAACTACAT 60  
 GTTATGATGT TAAGTTGAAG TTGAAACATG ATGTTTTCGA TTAAATTTAA GATATGCAAA 120  
 TTTATGTAGA GAAAATAAAT GTTATATACC CTATAATCTT TCACCTAATT AGTATTTAAT 180  
 TATATGGATT TGNNTTATAT TATAAAGAT GTTTTGATT TGTCTNTNGA TATTGNCAAA 240  
 ATTGTTTGGG TATNCTTATG TTCTCAAGTC TGTATCTGCC TCCCCTGCCT TATNTCTNAT 300  
 GTTTTGCCAC AGTTAACCCT TTGTGCTTCT TTGTAATCAA N 341

SEQ ID NO:3150

SEQUENCE LENGTH:339

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03720

SEQUENCE DESCRIPTION:

GATCTNATCA GTCCTAAGCG GGTGATGGGG CAACACGGTT AGCGGGGAGA GCACGGGGTA 60

GCGGGAGAAG GGCCTCTGGA GCAGGTCTGG AGGGGCCATG GGCAGTCCT GGGTGTGGGG 120  
 ACACAGTCGG GTTGACCCAG GGCTGTCTCC CTCCANAGCC TCCCTCCGGA CAATAAGTCC 180  
 CCCCCTCTTG NTCCACCCCT NAGATTGGGC ATGGGGTGCG GTGTGGGGGG CATGTNCTGC 240  
 CTGTTGTNAT GGGTTTTTTT TCGGGGGGGG NTTGCTTTTT TNTGGGTCT TTGAGCTCCA 300  
 AAAAATAAAC ACTTCCTTTN AGGGAGAGCA CACCTTAAA 339

SEQ ID NO:3151

SEQUENCE LENGTH:337

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03721

SEQUENCE DESCRIPTION:

GATCCTCTCC CTGGGATAAG CACTCCCAGC CCCGTTTATC AGAAACACAG GCAAGGAAAT 60  
 TGGAAGTCC ACCCAGCCCA GCATGATGGC TCAATTGGTT GGTTCGTTG TNAGTTGTCT 120  
 CTGTTGTTG TTAAGNNTT TAATAAAGTA CGTTTGCAT AATTGCCTTT AAATGGTTTG 180  
 TAATATTTGT AACGGTTTTA GCAGCCTATA ACTTTTCAGC TGGTGCTTTT ACTTAGGNA 240  
 AAAACAATT TGTAATACA GNACATTTGT TAAAAGGCAT AACNTAGAA CATAGCTTCC 300  
 TGTGTTGTGG ATTTGGTTTC CTNTATATTC AAAGTAN 337

SEQ ID NO:3152

SEQUENCE LENGTH:336

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03722

SEQUENCE DESCRIPTION:

GATCAGAGGC AGACAATGAC GAGTGAAGAT GGTGTAAAG CCCTCTTCAT TCCTGGAGGA 60  
 GCCTGCATCT AATCTNTNAG GCCCTCTTTC TCTGTGGGTC TCATGAACAG CAGTGGGGAC 120  
 CATTGAGNAC TTGAATGGCC TGTGTTGNTA TGGGCTTGCA AAGGACAAGC AGAGTTCACA 180  
 GAGCTCAGGA TAGAAACATC AGAGCCTCCT CCACGGGCTT CAGTGNAACT CCGATGAACT 240  
 GTACCTGAGG GAATTTTTTT NTAATCAAC CCCTTGTGTG GATGAATACA GGACCACAAA 300  
 ANTTGNTA CGTTGAAAA AAAANAANNT NTNNNN 336

SEQ ID NO:3153

SEQUENCE LENGTH:334

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03723

SEQUENCE DESCRIPTION:

GATCTGCATT CCGACTGCCT ATNAACGGGT GTGGGGGCCG GGGGCTGGAN TTGCTGAAGT 60  
 NTTCAACTTG CACTCGGAGC TCCTTTNATA CCTCAAAGCT GGCTGTNAGG TGGCAGCTCA 120  
 CACCCAGACT CACTGGCCAC ACCTCAGCAG GGGGGGAGTC GAGTGTCAGT NTCTTTCTGT 180  
 GAAGGCTTTT TTTTCCCTT GGCCTGGGAA TTTTCCCAT TTTAATGAAG GGGTTTAAA 240  
 TTGTTTCATT TTGTGTGCTG TGCTTCAAAG CCTTAAGTGT CAAATCTTGC ATTATCTNGT 300  
 TTGTACAGAA ATATACTGGC CTAGCAGNGG CAAA 334

SEQ ID NO:3154

SEQUENCE LENGTH:330

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03724

SEQUENCE DESCRIPTION:

GATCAAAATT TGTGTACTTG CAGGGCTTTC TTCTTTTTN TTCAAATTTA CAAGGGTTCA 60  
 TTTTGAAAC TACATTTTAA ACTTTGGAAT CAAATTGTTT CTTATTGGG AGGATAATGT 120  
 ATATACATTG GTATTATGTT AAATAATAAA ATTGTNCTAA TTGGTGCCA TTCCTGAAT 180  
 CACAACGTGA TTTTGNATC TCANGCTATT TTCATATGTN ATGTGTCAAT GTATCATCTC 240  
 TCAGAAAGGT TTACANTCC AACATTATA TGTNCTCTGT GTAAGTGAAT TTNACTTATC 300  
 TTTNTAAAC CAGNAACATT AATTGAGAAA 330

SEQ ID NO:3155

SEQUENCE LENGTH:330

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03725

SEQUENCE DESCRIPTION:

GATCTTCGCA AGCCAGCTTC TTCTGCATCT NAGGGGCTGC TGGCGCCCAN AGGAGGCAGA 60  
 CAGATGTCTN NTAGCTGAGT TTCTAACCGC ATGATGAGAC TCAGACCTTC CGCTGCACTA 120  
 GAAAATCTGC AACAGTGTCC CTGAGTCACT TCTCCTTAGT GGGCAGACTC GTGTTAGATT 180  
 TGTGGAACCC AGCTCTCTGA TTTACTCCTT TTGGAAAACC CATGGAATTT CATGTATAAG 240  
 GCTTTCATTT GTATTTNAAG GTTTTTCTGT TTGTTTGTAG TATATACATG GTGCTCAATA 300  
 GCAACATCTT AGCAGATGAA GCAGTTTATN 330

SEQ ID NO:3156

SEQUENCE LENGTH:329

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03726

SEQUENCE DESCRIPTION:

GATCTACTGC AAATCCTGCT ACGGAAAGAA GTATGGGCCA AAAGGCTACG GTTATNGCCA 60  
 GGGCGCTGNC ACGCTTAACA TGGACCGTGG CGAGAGGCTG GGCATCAAAC CAGAGAGTGT 120  
 TCAGCCTNNA CAGGCCTACA ACAAATCCAA ACACTTCTAA ATTNCTCAG AAATATGGAG 180  
 GTGCNGNGAA GTGTTCCAGG NGTGGGGATT CTGTATATNC TGCCGAGANG ATAATTGGAG 240  
 CTGGAAAGCC CTGGCACAAA ANCTGTTTCC GATGTGCAAA GTGTGGGAAG AGTCTTGANT 300  
 CAACANCTCT GACTGNAAAN AGAAGGTGN 329

SEQ ID NO:3157

SEQUENCE LENGTH:329

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03727

SEQUENCE DESCRIPTION:

EP 0 679 716 A1

5 GATCGGGCGC ACGGNCCGCT TTGGCAAGAG GGGCCTGGCA GTGAACATNN TGGACAGCAA 60  
GCACAGCATG ANCATCCTGA ACAGAATCCA GGAGCATTTT AATAAGAAGA TAGAAAAGATT 120  
GGACACAGAT GATTGGACG AGATTGAGAA ANTAGCCAAC TGAGAAGCTC CACCAGCCAC 180  
TGATGCCAGC CCTGGCACTG CCCCTGCACA GGAGACAAGT GCGTTCAGGG CACAGGCCCC 240  
GACATCACCC CAAGGNCAAC GGCACAAGTA GAGAGANACT ACCTACCTCA NTTCANATTA 300  
TGTTTGGCCT TGACAAAATT GTATGCAAN 329

10 SEQ ID NO:3158  
SEQUENCE LENGTH:327  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03728

15 SEQUENCE DESCRIPTION:  
GATCAAAATT ACTNGAACAA TTGTTAATT ATCCATTGTG CTTAGCTTTG TGACACAGCC 60  
AAAAGTTACC TATTTAATCT TTTCAATAAA AATTGTTNTT TGAAATCCAG AAATNATTTA 120  
AAAAGAGGTC AGGTTTTTAA CTATTTATTG AAGTATGTGG ATGTACAGTA TTTCAATAGA 180  
20 TATGAATATG AATAAATGGT ATGCCCTAAG ATTCTTTGAA TATGTATTTA CTTTAAAGAC 240  
TGGA AAAAGC TCTTCCTGTC TTTTAGTAAA NCATCCATAT TTCATAACCT TATGTAAAAAT 300  
ATGTNGTNCC TGTTTCCAAT AGGTGAN 327

25 SEQ ID NO:3159  
SEQUENCE LENGTH:324  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03729

30 SEQUENCE DESCRIPTION:  
GATCTGAATT TGGACCATT CACTAAAGAG AACATGAGTT TGCTCAGCCC TTTCTCACA 60  
AGAGGGAGGG CCCCGGTTCC CCAGACTTCT CCACGCGCTG GCTCCATAAA GGCCAGCTTT 120  
GGCCAGGCTG CCACAGGGGC CTNAGGAGCT CACTCTGGGC CTACCTGGTT TCAGTTAGAG 180  
GGTCCTCCTG TTATTTTCC ATTTAAAAAG TATGTCCTCA GAAAACTGTA NTGGAAGGAT 240  
35 GGGTGGCAGG AACTTGATA GTTCAGCTTC CAACACTTTG GAACAGATTA AAAAGGGAAT 300  
CTTTTAAATA AAAACGTATA NAAA 324

40 SEQ ID NO:3160  
SEQUENCE LENGTH:322  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03730

45 SEQUENCE DESCRIPTION:  
GATCTTGGTT TTAATTAAC TATTACTCTA TTAATATAAC CTTGGAATTC TATTCTAATN 60  
ATGTTGTTCT GGCTGCTTGT AGTATCAGTT CGCCCCCTCTT GTTAGGGAGA TATGTAACAA 120  
TCTGTCATTT AATTGAGCAG TCTTTTTCAC ATAACAGTAA TAGCAAAAAT CCTACCTACT 180  
CAGAATCATC TNCTTAGGTT GTCTCCTAAA TCTGAACAAT ACAGTTGTTT TATAAANTNN 240  
50 CATTTNGTCT CTTGAGATTN AATCAATTAG AACTCTTTAG GGAGAAAATA AATANTAGAN 300  
GAAANTATAT GCCTCANATT GN 322

55

SEQ ID NO:3161

SEQUENCE LENGTH:320

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03731

SEQUENCE DESCRIPTION:

GATCTGACTT TTTTCCTTCT CAAAAGAATC ATACTTGGGA TTACAGGTAC ATTTNATGTT 60  
ATATNATGGA TAAGTGAAAA NTTTTAAAG GAGATTTTAT ACCTTTTCAC ATTAAAAAAG 120  
GTATTTATAT TATNACTTTG TAGTGATTGT CTTAAGAAAA AATATAGCCC AAATGTATAG 180  
TAAATCAGC AGCTCAAGAA GAATTTCTGC TTCTNTTGT AGTTGATGCT TTGTTTTTNC 240  
CTGCAGTCAG AAATTCCTTG TATTTGTCAA ATGTATAATC AGCTTGTATT GTTTTTAAAT 300  
TAAANAAAAA TTTGANTAAA 320

SEQ ID NO:3162

SEQUENCE LENGTH:320

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03732

SEQUENCE DESCRIPTION:

GATCTGAAAA NAAACCTTAA TACGCTCATA TGGTTGGAGT GTTAAGTGAA CCTNTGATTT 60  
TTTNAGGGTT TTTNTACGTG TAGGCGTGAA TAGGGGGCAC CCCTTCAAAA CTGTACAAAAG 120  
AAGACGACTG TTTTCATTT CCATTAAAC ATTTTtagcc ACTTCATTTC TATTTATTGA 180  
ACAGGTCAAA TTTGTNTTGT TATTTGTGAG TACAGTACAT TAAAAAACA TCCTTATCGG 240  
TTATTTTTTT TTCAGTCGGA GTTTGACGTA TAAATNGTTT ATGCTTTTGG TGAATCTCT 300  
TAATAAACTG GTTCTTCAAA 320

SEQ ID NO:3163

SEQUENCE LENGTH:180

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03733

SEQUENCE DESCRIPTION:

GATCAGCTAG CTTGATTCTT GTGTACTTTT TTNAACTGT GGGTTTTCCT AGTAAATTTA 60  
ATTACAGAA ATNAATGGTA GCATTAGTA ATCTACAAAG GAAATATCAA AGTNTTTTNN 120  
AAGCCTGTNA TATTCAGTGT GTGCCACAGG ATTGAAATAA ATGACAATGT AATTATGAAA 180

SEQ ID NO:3164

SEQUENCE LENGTH:303

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03734

SEQUENCE DESCRIPTION:

GATCAGAATT CCGATTGAC GGGCAACCAA TCAATGAAAC AGACACACCT GCACAGTTGG 60  
AAATGGAGGA TGAAGATACA ATTGATGTGT TCCAACAGCA GACGGGAGGT GTCTACTGAA 120

AAGGGAACCT GCTTCTTTAC TCCAGAACTC TGTTCTTTAA AGACCAAGAT TACATTCTCA 180  
ATTAGAAAAC TGCAATTGG TTCCACCACA TCCTGACTAC TACCGTATAG TTTTCTCTAT 240  
TCTTTCATTT CCCCTTCCC CATTCCTTTA TTGTACATAA AGTAACTGGT ATATGTGCAC 300  
AAA 303

SEQ ID NO:3165  
SEQUENCE LENGTH:311  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03736

## SEQUENCE DESCRIPTION:

GATCTAGAGC CAGGCTGGTC AAGACAAGAA TTGGCTGGAA TAGGCTGCTC TTCCCCCATT 60  
CCATCATGTG CTGTCCCCAC CCCTTTGGCC ACCTGGGCTG ACTGTGTCTT AATACCTCAA 120  
GTGCAAGTAT ATAGGAGTAA GAAATNAACA ATGCCTGCCT CCTTATACTC ATGCCTACAT 180  
TGTATGACAT CTAGTATGAA AGGGAAACAT TAAAGGAAAA CCCTTGTTTT GCTCTAAAAC 240  
CTGAGGACGG TAAACACTGA GAGTAACCTG GTGCTTGCTT TGAAGTAAAA CACAAATACT 300  
TCCCTTTTAA A 311

SEQ ID NO:3166  
SEQUENCE LENGTH:309  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03737

## SEQUENCE DESCRIPTION:

GATCAAGGGC AATGCCAATG AACATCGGCA TGGATTATAA TTATGCCCTC CTGGAACTCA 60  
AAAAGCCCCA CAAGAGAAAA TTTATGAAGA TTGGGGTGAG CCCTCCTGCT AAGCAGCTGC 120  
CAGGGGGCAG AATTCACCTC TCTGGTTATN ACAATNNCCN NCCAGGCAAT TTGGTGATC 180  
GCTTCTGTGA CGTCAAAGAC GAGACCTATG ACTTGCTCTA CCAGCAATGC GATGCCCAGC 240  
CAGGGGGCAG CGGGTCTGGG GTCTATGTGA GGATGTGGAA GAGACAGCAG CAGAAGTGGG 300  
AGCGAAAAAN 309

SEQ ID NO:3167  
SEQUENCE LENGTH:309  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03738

## SEQUENCE DESCRIPTION:

GATCTTGATA TGTTTAAACA TTATCATGGC AGGGAAATAT ATAAAGAAGA AAAATATTTT 60  
NACATTAAAC CTTTCTAAA ANTTGTAAAT AGAAAAATAA TTTGGTTTTT NATCAAGANC 120  
AACACTTATC GTTATGTATT GTGTTAGTTA TATTGCCAGT CTGTTGCGAC TGA CTCAAAA 180  
AGTTAAATGT TGCCACTGCT GANGATGATT ATGNGCATCG CANACTTTGT TTCTGNCCCA 240  
TTTTGGCAGT TTTNATATAC TCCNTTAAGA TGTTGAATGT TACAGGTTAN TAAAGTTAAT 300  
ACCTTTAAA 309

SEQ ID NO:3168

SEQUENCE LENGTH:306

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03739

SEQUENCE DESCRIPTION:

GATCCTTTAC AGAAAAAGTT TTCTGACCTC AATTCTAAAG TAATTGTAGT AGGGAGCTGG 60  
AGGACTTTCT TTCCCTTTAT GGTAATTTTT TGAGCTACAA AAGAGCCTTG CAGAAATGGG 120  
TGAAGGGATT AANCTTTTAA AAATAAATGC TATATATTAG GAAAAATAAA AATATTTTAG 180  
AGCCAAGTTA ACAAGTACTT CAGCAAAACA TGCTAGTTTT ATGCAGGGGA TTCTGTATTC 240  
CAAATGGATA CANTCCGACA TATATAAAG AATCAGATTC TTAATATTG ACTCTTATTT 300  
NGCAAN 306

SEQ ID NO:3169

SEQUENCE LENGTH:306

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03740

SEQUENCE DESCRIPTION:

GATCATACCC AGAATTCAT GTTTGATATT TTAAGAATGT ATGTTCTAGT GTTTTTNAGA 60  
GTGAGTCTAC CATCTGTATA AAAACACCTT GGGGGCAGGC AGGGGCATTT AAAAATGTAG 120  
GACCTATCGT CCAGACTCAC AGAGTGGGGC TCCAGAATCT CCATTTTAA CAAACTCTCT 180  
TAAGTAATTC TGATGTGTAC CAAAATCAGT GCCATTGGTG TGTGTGTACG TAACTATATA 240  
CATATGTGTG TGTGTGTATA TATATAATGT GTCATAACCG TAAACAATAA ACAATATCAA 300  
GNTAAA 306

SEQ ID NO:3170

SEQUENCE LENGTH:306

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03741

SEQUENCE DESCRIPTION:

GATCTGTCAT GTTAAACCC CCTACTTCTA AGGGAAGTTC TCTAATCTCT TATCCTCATC 60  
CCCAAATAGT GTTTTCTTCC TCTGGGTCTT TATAATNTTG GTATCAATCT CACAGCATTT 120  
AGTGCTTCTT GCCTGGTGTG ACAGTTACCT GTGTGCATGT GCAATTTCTA ATTTCCACG 180  
CTAGACTGTG AGCTTCTTAA GGCAAGAATC ATGCCTTGTG GGTTCCTGTA TTCCTCATGG 240  
TGCCAAACAC AGTGCCTTCT ACATTGCAGG CGCTGAATAA ACATTTTAA AGCAAAAAAA 300  
TTNAAA 306

SEQ ID NO:3171

SEQUENCE LENGTH:305

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03742

SEQUENCE DESCRIPTION:

GATCTCCAGT GGTCAAAGA CATTACCCT TAATATCAGA CAACATTTAT ATTTTAGTGA 60

5 AGAAACAAGT TCTCGGGTGG GGAATCTATG TTCTACTCAG ATTTATATGT TTGGAGGAAA 120  
 AAAGCCTTTT TTGTAAAAAT ATTTAAATTT ATATANGAAA ATGTTAGAAA AAAATATGGG 180  
 GGAGTGTATT ATAAANCCTG CTTTATTTGC CATGGGGCCN GGGGGAGGCC NGGCCTAATA 240  
 CTCCTAAAGT ANGTGTTNGG GNCCTNTTTT TCTTCCAATC CACCTGGTGC TGTTCNTGT 300  
 AANGN 305

10 SEQ ID NO:3172  
 SEQUENCE LENGTH:303  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS03743  
 SEQUENCE DESCRIPTION:  
 15 GATCTCCGGG AGGGACAGAT GGCCAATNTC TCCCTTCCA AAGCAGGCC TGCTCCCCGG 60  
 GCAGCCTCCC GCCGAGGGGC CCAGCCCCCA ACCCACAGGC AGGGAGGGGC ATCCCTCCCT 120  
 GCGGACCTCA GGGAGCGAAC GTGGATGAAA ACCACAGGGA TTCCGGACGC CAGACCCCAT 180  
 TTNATACTTC ACTTTTCTCT ACAGTGTGTG TTTGTTGTTG TTGGTTTNA TTTTNTATAC 240  
 20 TTTGGCCATA CCACAGAGCT AGATTGCCCA GGTCTGGGCT GAATAAAACA AGGNTTTTCT 300  
 AAA 303

25 SEQ ID NO:3173  
 SEQUENCE LENGTH:306  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS03744  
 SEQUENCE DESCRIPTION:  
 30 GATCACTTTT GAGCTCTGAA GCTTTGAATC ATTCAGTGGT GGAGATGGCC TTCTGGTAAC 60  
 TGAATATTAC CTTCTGTAGG AAAAGGTGGA AAATAAGCAT CTAGAAGGTT GTTGTGAATG 120  
 ACTCTGTGCT GGCAAAAATG CTTGAAACCT CTATATTCTT TTCGTTTATA AGAGGTAAAG 180  
 GTCAAAATTTT TCAACAAAAG TCTTTTAATA ACAAAGCAT GCAGTTCTCT GTGAAATCTC 240  
 35 AAATATTGTT GTAATAGTCT GTTCAATCT TAAAANGAAT CAGTAAAGC AAACAAGGGG 300  
 TTAAAA 306

40 SEQ ID NO:3174  
 SEQUENCE LENGTH:301  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS03745  
 SEQUENCE DESCRIPTION:  
 45 GATCAGCAAA CACGATAGAG GAGACCAGTC AGTACTTCTT GGAGGGGGCN GGAGGAGAGA 60  
 GGAAAAGGGA GGGCGAGAAT NACCACACAA CACAGCCNTT NGACCATGAG CAGAAGCGTC 120  
 CGTGGGAACT CCACTGGGGT NGATGGGCTG CCTGCACAGC CCCTGGAGAG GGGGCCAGGC 180  
 ACACCCTCAG AGGAGCTGCA ACCCGTGGCC TGGCCTGCTA CATGCCCTGC TTCCACGTGG 240  
 50 NTGCCACGGT GACACANCCA CATTNACCAA TCCCNCCGG GTCCTGGGA CGNAGNCACG 300  
 N 301

55



SEQ ID NO:3175

SEQUENCE LENGTH:299

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03746

SEQUENCE DESCRIPTION:

GATCAAAAGTT GTCATGAATA CTGACTTGGG CGTGGGACCC ATCCGAGATG TGCTGCACCA 60  
 CATCTACAGT GCGCTGTATG TGGAGCTGGT GGTGAAGAAT CCCCTGTGCC CGCTGGGCCA 120  
 AACTGTGCAA AGTGAGCTCT TTCGCTCCCG ACTGGACTCC TATGTTCCGT TTCTGCCNN 180  
 NTTCTCCGCC CGGGCTGGCT GAAGCAACCT ACCTCAAGTN TCAGGAGAAT TCATGTCTNC 240  
 CTGGGGCCCT TCCGAACCTT GTGCCAACTA AGGGCCCCCA NTGTAAGCCC CCGTACCTN 299

SEQ ID NO:3176

SEQUENCE LENGTH:298

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03747

SEQUENCE DESCRIPTION:

GATCTGAATT ACTACAGAAA AATAATTATG TTGCTTGCTT AATNATCCC AGGAACTTC 60  
 GTTGTAGGCA TATATTTTAT AAGAGTATTA TACAGTGTTA ACTATGCAAG TAAGTTCTAA 120  
 AATNACACAA TNATCTGTGT AATGTTTTAG TCCAATNACT GTGATTATT CAACTCTGTT 180  
 CTAAAGTTAT CTGGAATTGT CATGCTGCCT CAATTTACAG AAATCTATAA TAGATTCTA 240  
 TAGAAATGTA TAAAGACGTA GCAGTCATT TGTGTTTCT AAATAGATAA CATATAAA 298

SEQ ID NO:3177

SEQUENCE LENGTH:297

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03748

SEQUENCE DESCRIPTION:

GATCAGAGTA TGGGTTCTCC ATGTAGCAAT ACTTCAGTGA GATTAAGTAT AAACAGTTTT 60  
 TGGCAAAAAA CAACACAGTC TACTCTTTCT GCTTACAAAG ACAAAGCCTT ACAAACAC 120  
 TATGAAGGTA AAGGGAGGAC AGCTTGCTTC TTTGCCCAGA CATTACAAA GTTGTTTTTA 180  
 AANCACACTC ATAAGTAAGT TTGGCAAGTT GTTTAAAAA TGTCTTTTG TTTGTACAG 240  
 TTCTGTTAGA TGTGTNATA TTTAANAGT TTAATTANA ANNTTNATT TNGTCCN 297

SEQ ID NO:3178

SEQUENCE LENGTH:297

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03749

SEQUENCE DESCRIPTION:

GATCTNATTA CCTTCACGGA AGGAAGCGGA CGCTCACCAC GCTATGCCCT CTGGTTCTNT 60  
 GTGGGGGAGT CATGGCCCCA NNACCAGCCG TGGACCAAGA GGCTCGTNAT GGTCAAGGTT 120  
 GTGCCACGT GCCTCAGGGC CTTGGTAGAA ATNGCCCGG TAGGGGGTGC CTCCTCCCTN 180

GAGAATACTG TNGACCTGCA CATTTC AAC AGNCACCCAC TCTCNCTTNA CCTCCGACCA 240  
GTACAAGNCC TACCTGCAGG ACTTGGTGA GGNATGGAT TTCCAGGGNC CTGGGTN 297

5

SEQ ID NO:3179  
SEQUENCE LENGTH:295  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear

10

CLONE:HUMGS03750

SEQUENCE DESCRIPTION:

15

GATCATCACA TTTCGTGAAT TGAGGCCATG TTCAGGTGCT AAGGAAGTAT GCCTTTNACA 60  
CAGAAGATTG AGAAAAATTC CTAGATATAA ATACAGATAA ATCAGACGTT ACAGTGGTGA 120  
CGTAGTAACC ATCATGGCAA TGGAAAGNAG TCCAATTCAT AGCCTAAAAC TTCAAATGTA 180  
TTCTTAGGAG TCAGATTTTA CTGAATATTT TACCCACAAT AGCTGCCTAT TTGTTATAA 240  
TAAATATAT ATAANTNTAT NTCTNNNCCT TCCTTTAANC TGTAANA NNNAN 295

20

SEQ ID NO:3180  
SEQUENCE LENGTH:295  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03751

25

SEQUENCE DESCRIPTION:

GATCCCAGCA CTACTTTTTA TTAGTGGAGA AATGGGGGGG ATAGAAAATT CTACTTTGAA 60  
TTATTTAGTT TTTTAAAG AGTGGGTTGT GTTGTNCTT CTCCCACCTT TCAGCATTTA 120  
TAGAACATGC TGCCCCACAT ACAAAGTCAA GACCACTTAC TTTATGTGA CACTAGTAGT 180  
TTGGGGTTAA TGTTTGTGT AAGANCAGCT GCATATGAGT AAAGTTACCC CAACCACAGT 240  
GAGGAGGAAG ATGTTACAT ACTGGAAGT TCCTGCCAAA TAAATTTGC CCCTN 295

30

SEQ ID NO:3181  
SEQUENCE LENGTH:294  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03752

35

SEQUENCE DESCRIPTION:

40

GATCAGTTAA TGCTAAGAG TGAAGTAGT TCTATTGACA TTCCTCAAGA TATTTAATAT 60  
CAACTGCATT ATGTATTATG TCTGCTTTAA TCATTTAAAA ACGGCAAAGA ATTATATAGA 120  
CTATGAGGTA CCTTGCTGTG TAGGAGGATG AANGGGGAGT TGATAGTCTC ATAAACTAA 180  
TTTGGCTTCA NGTTTCATGA ATCTGTAAGT AGAATTTNAT TTTCACCCCA ATAATGTTCT 240  
ATATAGCCTT TGCTAAGAG CAACTNATAN NTTANCCCTA TTCTNTCTGT GAAA 294

45

SEQ ID NO:3182  
SEQUENCE LENGTH:293  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03753

50

SEQUENCE DESCRIPTION:

55

EP 0 679 716 A1

5 GATCCGTGCT GGAAACTCGC AGGGGGACTT TTACATTAGG CAAATCAACA ACGTCAGCGC 60  
 CATGCTGGTC CTCGCCCGGC CGGTGACGTG CCCCCGGGAG TACGTGCTGG ACCTGGAGAT 120  
 GGTCACCATG AATCCCTCA TNAGCTACCG GGCCAGCTCT GTACTGAGGC TCACCGTCTT 180  
 TGTAGGGGCC TACACCTTCT GAGGAGCAGG AGGGAGCCAC CCTCCNTGCA GCTACCCTAG 240  
 CTGAGGAGCC TGTGTGAGG GNCAGAATGA GAANGGCAAT AAAGGGNGAA AGN 293

10 SEQ ID NO:3183  
 SEQUENCE LENGTH:293  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS03754  
 SEQUENCE DESCRIPTION:  
 15 GATCTGTGGA CTTTNATTTT TTTAAGAGAC TTAACAATT TNATGACTGT ACTACCTGAA 60  
 ACAAAGTGAG AAAGGACAGG TGTATTTTTC TAAGTNATCA AGATAAATCC TTAANAATTC 120  
 AGTCTAAATN AGCAACCAGG AAGGAAAAAT ATATTAAAA CAACAAAAAA GTGGCACATG 180  
 TCCAGGCAGT GTGAGGATTT GCTGTATATA AGTTGCCTGC TTTGTATTNT TNAATCTCT 240  
 GCATCACTCA TTGGAAGTGC TTCTNAAGAG AGCTGCTCTG TGTTCAGTTG AAA 293  
 20

25 SEQ ID NO:3184  
 SEQUENCE LENGTH:395  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS03755  
 SEQUENCE DESCRIPTION:  
 30 GATCAAGATG ACCAAGATGT ATAAAGGGTT CCAAGCCTTA GGGGATGCCG CTGACATCCG 60  
 GTTCGTNTAC ACCCCCGCCA TGGAGAGTGT CTGCGGATAC TTCCACAGGT CCCACANNCC 120  
 GCAGCGAGGA GTTTNTCATT GCTGGAAAAC TGCAGGATGG ACTCTTGAC ATCACTACCT 180  
 GCAGTTTNT GGCTCCCTGG AACAGCCTGA GCTTAGCTCA GCGCCGGGGC TTCACCAAGA 240  
 CCTACACTGT TGGCTGTGAG GAATGCACAG TGTTCCTCTG TTTATCCATT CCCTGCAAAC 300  
 TGCAGAGTGG CACTCATTGC TTGTGGACGG ACCAGCTCCT CCAAGGCTCT GAAAAGGGNT 360  
 TCCAGTCCCG TCAACTTGCC TGCCTGCCTN GGGGN 395  
 35

40 SEQ ID NO:3185  
 SEQUENCE LENGTH:290  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS03756  
 SEQUENCE DESCRIPTION:  
 45 GATCAGCACT TNANTCGGAA AGTTGGAACC TCTGACAAGA CCAAGTACTA CCTTCAAGGT 60  
 AATCCGTGGC TTCCACAAA GTTCCACATT TAACTTCCTC CAAGGAAGGG GATTAAAATT 120  
 TNAACTAAC TCCCTTCAGT TGAAATCTCG GACCACTNNN NAAAACAAA ACCATGGTCT 180  
 AATTNTTNC TTTGTTATGA ATTTNTTGAC AGTGGATTGA GCGATACGTG TCAGANCTAN 240  
 GCATTTCACT GTAGGCAAAT TGTGTCTTAG TTATCANGTA AATGTACAAA 290

50 SEQ ID NO:3186

55

SEQUENCE LENGTH:288

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03757

SEQUENCE DESCRIPTION:

GATCCAGATG ACTGAATTC AGATAGCATT TTTATGATTC CCAACTCATT GAAGGTCTTA 60  
 TTTATATAAT TTTTCCAAG CCAAGGAGAC CATTGGCCAT CCAGGAAATT TGGTACAGCT 120  
 GAAATATAGG CAGGATGTTT AACATCAGTT TACTTGCAGC TGGAAGCATT TGTTTTTGAA 180  
 GTTGATACATA GTAATAATAT GTCATTGTAC ATGTTGAAAG GTTCTATGG TACTAAAAGT 240  
 TTGTTTTATT TTATCAAACA TTAAGCTTTT TTAAGAAAAT AATTGGGN 288

SEQ ID NO:3187

SEQUENCE LENGTH:288

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03758

SEQUENCE DESCRIPTION:

GATCCCCAAA AAGTGAATAT CAATGGAGGA GCTGTTTCTN TGGGACATCC AATTGGAATG 60  
 TCTGGAGCCA GGATTNITGG TCATTNACT CATGCCTTGA AGCAAGGAGA ATACGGTCTT 120  
 GCCAGTATTT GCAATGGAGG AGGAGGTGCT TCTNCCATGC TAATTCAGAA GCTGTAGACA 180  
 ACCTCTGCTA TTTAAGGAGA CAACCCTATG TGACCAGAAG GCCTGCTGTA ATCAGTGTGA 240  
 CTACTGTGGG TCAGCTTATA TTCAGATAAG CTGGTTTCAT TTTTNATN 288

SEQ ID NO:3188

SEQUENCE LENGTH:285

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03759

SEQUENCE DESCRIPTION:

GATCAGCAGC TGTGAAAATA AAGCTTGTA GCCCTCTGCT GGCCACAGTA NAGGAAAGTA 60  
 GCACAAATAG GATACAGTTG TATGTAGTCA TTGGCAACAA TTGCATACAA TTTTACTACC 120  
 AAGAGAAGGT ATAGTATGGA AAGTCCAAAT NACTTCCTTG ATTGGATGTT AACAGCTGAC 180  
 TGGTGTGAGA CTTGAGGTTT CATCTAGTCC TTCAAAACTA TATGGTTGCC TAGATTCTCT 240  
 CTGGAAACTG ACTTTGTCAA ATAAATAGCA GATTGTAGTG TCAAA 285

SEQ ID NO:3189

SEQUENCE LENGTH:284

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03760

SEQUENCE DESCRIPTION:

GATCTACCA TTATGACATC CATCCCCCTA GCTCACCACA TAGCACATAG AATGATATTT 60  
 TTAATTTGTA AGAGGCCATC CAGGTACTAA GGNCCCAAGG CATACAGATT CACAAAATNA 120  
 ACTAATCTTT TTGCCTCAGA ATACCAAAAC ANCAAAAANTA TAAAGCTGTA TTTGGACANC 180  
 TANAAAACAC CAAACTATCT CATTGCAATT NGTATTGTAG CAGATGTTCA GCAACTATCC 240

TAATCANTGT TATTGTGTTT CANTTTAACT GGGTTAAATG TTTN

284

SEQ ID NO:3190

SEQUENCE LENGTH:282

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03761

SEQUENCE DESCRIPTION:

GATCTCGACT CCCCCCTGGC CACAGACCCC CAGGTCATTG TGTTCATTGT ACTCTGTGGG 60  
 CAAGGATGGG TCCAGAAGAC CCCACTTCAG GCACTAAGAG GGGCTGGACC TNTGCGGCAG 120  
 GAAGCCAAAG AGACTGGGCC TAGGCCAGGA GTTCCCAAAT NTGAGGGGCG AGAAACAAGA 180  
 CAAGCTCCTC CTTGAGAAT TCCCTGTGGA TTTTAAAC AGATATTATT TTTNTNATTA 240  
 TTGTGACAAA ATGTTGNTAA ATGGGATATT AAATAGAATA AA 282

SEQ ID NO:3191

SEQUENCE LENGTH:279

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03762

SEQUENCE DESCRIPTION:

GATCTGGAGA AGTAAGATGG CCAAATAAAA GCCTCTACCA ATCATCCTCC CCACAGGAAC 60  
 ACCAAATTTA AGAACTATCT ACACAAAAAA GCACCTTCAT AAGAACCAAA AATCAGAGAG 120  
 AACAAGGATA AAGAAGTATC CAAATACAAA GAAAATGTTA TGCAAGTGAC CTTTAGAGAT 180  
 GTTTTAAAGA TGACAAAATA TTGATGANGA TGGGCCAACA AGTGTTACTG TTACCTCTAA 240  
 TAAAGTTTCA TCACTAGTTT CACCATGGTT AATTGGAAG 279

SEQ ID NO:3192

SEQUENCE LENGTH:277

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03763

SEQUENCE DESCRIPTION:

GATCTGCTCA AATGCACCAA CACTGCCAAG TGAATAAGGT AGAAAAGAAA AATAACAGGT 60  
 ATCGTCATCT GAAGGACAGA TGAATCTTTT TCTGCCCCCTT CTTCAATG GAATATAAGG 120  
 AACAATTATG GGATGTCATC AGAATGGATG CCATAGGACC TACAGCTCCC TTTCTNTTTA 180  
 TTGTNATTAT ACTTTAAATA TGACATTGTC TTTNATGTGT ATGTTCTAT ATTTTCAATG 240  
 TATCTTTTTC CTTAGTAAA CCTGATATTC AAATAAA 277

SEQ ID NO:3193

SEQUENCE LENGTH:277

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03764

SEQUENCE DESCRIPTION:

GATCACAGGG AGCCTGTGTT TGTGGAGGT GTTCCAGAAT CTNACTGAC ACCACGCTTG 60

GCCCCAGCA AACNTTCAC AGGCTGCATA CGCCACTTTG TGATTGATGG ACACCCAGTG 120  
 AGCTTCAGTA AAGCAGCCCT GNTANGCGGC GCCGTANGCA TCAACTCCTG TCCAGCAGCC 180  
 TGACATGACA NAGCACAGCT GCCCAANTAC AAAGTTCTTT AGNGCAATGN AAGNAACACA 240  
 5 AAAGCCAGNC CAGGAGGCNC CAGTTNCTTA TTCCTTN 277

SEQ ID NO:3194

SEQUENCE LENGTH:272

SEQUENCE TYPE:nucleic acid

10 TOPOLOGY:linear

CLONE:HUMGS03765

SEQUENCE DESCRIPTION:

GATCACAGAA GCCACTGCAC TCCAGCCTGG GTGACAGAGT GAGACTCTGT CTCAAAAAA 60  
 15 AATTAAATAA ATTATTATAA CCTTTCAGAA ATGCTGTGTG CATTNNATG TTCTTTTTTT 120  
 TAGCATTACT GTCACCTCC CTAATGAAAT GTACTTCAGA GAAGCAGTAT TTTGTAAAT 180  
 AAATACATAA CCTCATCTG ANTAATGTCC CTCATTTTGA CTATAACTGT GCTTGGTTTC 240  
 AAANGCAAAN TTAANCAAAA ATCTCAGTCA AA 272

20 SEQ ID NO:3195

SEQUENCE LENGTH:272

SEQUENCE TYPE:nucleic acid

25 TOPOLOGY:linear

CLONE:HUMGS03766

SEQUENCE DESCRIPTION:

GATCTCCTGC TGGTCAGTGG GGGGGCGGCA GCACTACCGT GGCCTGGTAC CAGGTGAGCC 60  
 CGCTGGCCGC CCGCCTGCTC TACCCCTACC TGGCCTGGCT GGCCTCGCG ACCACACTCA 120  
 30 ACTACTGCGT ATGGCGGGAC AACCATGGCT GGCATGGGG ACGGCGGCTG CCAGAGTGAG 180  
 TGCCCGGCCC ACCAGGGANT GNAGNTGNAC CAGNAGGTGC CATNANGTTT NTAATNTAGT 240  
 GGCCGTNANG TTTTAATGAC CANTGGGNCT GN 272

35 SEQ ID NO:3196

SEQUENCE LENGTH:269

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03767

40 SEQUENCE DESCRIPTION:

GATCCCATCT NTTTTCCCTT CTTTCCTCCT GGTTCGGTC AGTTCAGAGG ATTTAACAAT 60  
 CACAAGTGTC CTGCAAAAAT;GCCTGAACAT TATTCTTAGG CCCTCGTGA TTTTTTTTTT 120  
 CAGAAAATT AAACAAAAA NGACTTACTA NGAAATATGT ACAGTACCC CTGTTTTCAG 180  
 GCACTATGTT TGNGANCATT TTNGCCATTG ANGTTACAC GTGGCATCAG CCCATGCAAG 240  
 45 ATAGGTTTCT GTATTNNTAT ATNANNNTN 269

50 SEQ ID NO:3197

SEQUENCE LENGTH:269

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03768

SEQUENCE DESCRIPTION:

5 GATCCAGCGA GGGGTCCAGG CCCTCTGCAT CTCCTCAGGC TCCAACCCTG CTCCTCAGC 60  
 AATNAGCTCT CCTCCAGCTT TGGCTTTGGG AAGCCAGACT CCAGGGACTG AAAAGNAGCA 120  
 ACAAGGAGAG GGTCTGCTTG AGAAATGCCA GATGCTTGGT CCCCAGGAAC TAAGGCGACA 180  
 GAGTGCAGGG TGGGGGCAAG ACTGGGCTGT AGGGGAGCTG GACTACTTTA GTCTTCCTAA 240  
 AGGACAAAAT AAACAGTATT TTATGCAAA 269

10

SEQ ID NO:3198

SEQUENCE LENGTH:267

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

15

CLONE:HUMGS03769

SEQUENCE DESCRIPTION:

20 GATCCCCTGG AGCCCAGGAG GNAGGTGTGT NAGCTCAATC CGGACTGTAN CGAGTTGGCT 60  
 GACCACATCG GCTTTNAGNA GGCCTATCGG CGCTTCTACG GCCCGGTCTA GGGTGTGCGT 120  
 CTGCTGGCCT GGCCGGCAAC CCCAGTTCTG CTCCTNTCCA GGCACCCTTC TTTCTCTTC 180  
 CCCTTGCCCT TGCCCTGACC TCCCAGCCCT ATGGATGTGG GGTCCCCATN ATCCCAGCTG 240  
 CTCCCAAATA AACTCCAGAA GAGGAAA 267

25

SEQ ID NO:3199

SEQUENCE LENGTH:266

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03770

30

SEQUENCE DESCRIPTION:

35 GATCTGAACC TGTCAATTGA AGTACAGGTT AAAGACTGTG TCCACTTTGG GCATGAAGAG 60  
 TGTGGAGACT TTTCTTCCCC ATTTTCCCTC CCTCCTTTT CCTTTCCATG TTACATGAGA 120  
 GACATCAATN AGGTTCTCTT CTCTTTCTTA GAAATATCTG ATGTTATATA TACATGGTCA 180  
 ATAAAATAAA ACTGGCCTGA CTTAAGATAA CCATTTTAAA AAATTGGGCT GTCATGTGGG 240  
 AATAAAAGAA TTCTTTCTTT CCTAAA 266

40

SEQ ID NO:3200

SEQUENCE LENGTH:265

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03771

45

SEQUENCE DESCRIPTION:

50 GATCTGACTT GGGGAAAGGG TTATCAGAGC CTAGAGGGGC TTAAAAAGTA ATCATTTGAT 60  
 GTACATACCA CACTCCTTGG CTTCCTTCT CTTCCTTAA CCCTTTCTGC TTTTCATTAA 120  
 CCACATTCTT GCACAACTCA TTTCTGAAAA CCTACCATGT TTCTTTACAG AGCCATCCAA 180  
 AAATTTTTTG TCCCTACATA GCAATTTTCT GTGGCACTGA GAAACCATGT ATGACCACAA 240  
 TAAAAATCCA TTTTGTGAAA GGAAA 265

55

SEQ ID NO:3201

SEQUENCE LENGTH:262

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03772

SEQUENCE DESCRIPTION:

GATCTCAGCT CACTGCAACC TCTGCCTCCT GGGTTCAAGC GATTATCCTG CCTCAGCCTC 60  
 CTGAGTAGCT GGGATTACAG GCATGCGCCA CTATGCCAG ATAATNTTTT TGTATTTT 120  
 GTAGAGACAG GGTTTTACCA TGTGGCCAG GCTGGTCTGG AACTCCTAAC CTCAGGTTAT 180  
 CCACCCACCT TTGGGCCTNC CAAAGTGCTG GGATTATAGG CATGGANCCA CCGTGNCTGG 240  
 NCANAGATGT AAGTNTAAAT TN 262

SEQ ID NO:3202

SEQUENCE LENGTH:260

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03773

SEQUENCE DESCRIPTION:

GATCCACCTG CCTCGGCCTC CCAAAGTGCT GGGATTACAG GCGTGAGCAC CATGCCANC 60  
 CACCTTTTCT ATNTTATAGT ACATAAACAC TCACCACTGT GTCACAGTCA CCTACAGTAT 120  
 TCAGTACAGT AGCATATGCT GTACAGGCTT GTAGCCTAGG AGCAATAGGC TATACCATAT 180  
 AGCCTAGGTG TGTACACCAT CTAGGTTTTT CTAACCTACAC TCTATGGNGT TCACACAATA 240  
 AAATTGCCCA NCGACGCAAA 260

SEQ ID NO:3203

SEQUENCE LENGTH:225

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03774

SEQUENCE DESCRIPTION:

GATCCAGCT TATGGCCTTG ACCCAGCCGT CCTCACAGAT GCCGGGTGAC CCTCTAGCTC 60  
 TCTCTGCATC TCCCACCCCG CGACACCCTG GGACCCTCGA CCCCACCCTT CTTTCCTACC 120  
 AGCCACAGAGC CTTGTGGCTT GTACAGTTTT GAAACTCCCG TTCTATTTTA TGATGGTTGA 180  
 TAATAGTCAG TAACNNAATA AAGGAACGTT TGTAAAAATA TCAAA 225

SEQ ID NO:3204

SEQUENCE LENGTH:216

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03775

SEQUENCE DESCRIPTION:

GATCTGCCCC CGGCGNACCC GTGTTATGTT TTGTGCTGTG TCCACGCGCT AAGACGACCC 60  
 CCTCCCCCGT ACTGACTTCT CCTATAAGCG CTTCTCTTCG CATAGTCACG TAGCTCCAC 120  
 CCCACCCTCT TCCTGTGTCT CACGCAAGTT TTNNACTCTA ATATNNNNAT GGCTTTTTTT 180  
 CTTGCGCAAA AAAATAATAA AACGTTTCTT CTGAAA 216



SEQ ID NO:3205  
 SEQUENCE LENGTH:256  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS03776  
 SEQUENCE DESCRIPTION:  
 GATCTGACAC TTCCTTTCCA TTGCTTGGCC TGAACAGACT GACCTTGTA ACTTAAGCCT 60  
 GGAGTCCATG CCTCGTCTC CTTTGTGTTCA TTGCTGTTAC CAAGAAAGCC AAGGAAGAGC 120  
 AGCCTGACTC ATTCTTCTTG GCTGCAGCCT CTTCCCCACT TCCTGGGAGT GACCCAGCGT 180  
 TATTCCTGCC TCCTCACTCC TATTCTCTTT GCCTTTGTGT AAAAATAAAA TGGAAATAAA 240  
 CAAGTTGCAC AGTAAA 256

SEQ ID NO:3206  
 SEQUENCE LENGTH:256  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS03777  
 SEQUENCE DESCRIPTION:  
 GATCTCTTTT NATCATATAT GACATTAAAG CTACAGAAGT TTTGTGCAAN AATCTTAATT 60  
 CATATTTATN AATTCAAGG GAATATTGAA AGGTTTTAAA ATGGCATACA GATAATGGAA 120  
 AATAAGCTTT ATGTTTCAAG AAGGGCAGAC TCACGAATTT TTTAGAAAAC AGTGCTTCTT 180  
 AATGATATGC TATTATNCTT ATNAGTTATG TGCAAGCTTT GTATATNCTT ATATNTATAT 240  
 NTAACNTAA CCCTCN 256

SEQ ID NO:3207  
 SEQUENCE LENGTH:253  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS03778  
 SEQUENCE DESCRIPTION:  
 GATCCCAATT CGAGAGGTTT TAACCCAGAG ANCGGACATC TCGATTGCAC ACGTTCTGGT 60  
 TGCCCGAGCC GACCTGTCTT GTCTCGTCCC AGCCACCAGC GTGGCTGTGC GNAGAGGGAC 120  
 CTGCTGTGCC ATCAACAAGG TGCTTATGGG NAACGTTCCA TACCGGGGGN GCCGCCCCAA 180  
 TNAGCTGGAG CCTCCCATGC CCACCTGGAG NAGCNGAAGA GAGGATGGAG GCCCCCAGTG 240  
 NNGGNNTCGC ANN 253

SEQ ID NO:3208  
 SEQUENCE LENGTH:252  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS03779  
 SEQUENCE DESCRIPTION:  
 GATCATGNTT CATGTGCTAA AAATAAACTT GAAACACGGA AGTAGTGGTT GGTCCAGTTT 60  
 GAAAGCTCTT ATNAGTATTC TTCATCCTGG CTGTAATAAT AGCCATNATT TGTNATGCCT 120  
 TTGTTATGTA GCAGACACTC TTAAGNATTT NATGTGTATN ATTCAAATTG CTATNACTGT 180

TCTTTTATA GTTGAGAATC TCAGGATACC TACATTTATC ACTTTTTC AA TATATATGTA 240  
TTTCTTATTA AA 252

5 SEQ ID NO:3209  
SEQUENCE LENGTH:251  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03780  
10 SEQUENCE DESCRIPTION:  
GATCAAGCTG TCCGAACCTA CCAAGAGCAC AAAGCAAGCA TGCATCCCGT GACTGCAATG 60  
CTGGTGGGGA AAGACTTAAA AGTGGATTAA AGACCTGCGT ATTGATGATT TTAGAGATTT 120  
CTCTTTTTTA AATGGAATTC GTAAAGAAAT ATAAACTTC AGCTCACAAT TAAAACTGTC 180  
15 TTTTATGTTT TGGCTTTTTA TTGTTTGTT GGTGATTTTA CTGAAATAAA GTTGAGCTAC 240  
TTCTTCTTAA A 251

SEQ ID NO:3210  
SEQUENCE LENGTH:250  
20 SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03781  
SEQUENCE DESCRIPTION:  
25 GATCTTGTGT TCAGATGAAA GTGCAAGTTT TTATTAATTT GGATTGCCTG AACAGTGTAT 60  
CCCATGATGA TGAAGGAAAA TGGAGAGATT TTTCTTTTAA ACTCTGNNNN NTCAGAGATG 120  
AAGCCACGCC TTTCCATTTT TCAATGCTGC ATATTTAATC TGCAACAAAA ATGTTAAGCC 180  
ATAACAGCCT TTTTATATTT TAGTTTGTC CTTTGCATT GCAGAATAAA TACTGGNTAA 240  
CCATTTTAAA 250

30 SEQ ID NO:3211  
SEQUENCE LENGTH:251  
SEQUENCE TYPE:nucleic acid  
35 TOPOLOGY:linear  
CLONE:HUMGS03782  
SEQUENCE DESCRIPTION:  
GATCTTACTT GCTCCTGCTT ACGAAGATTN CCCAATNACT GGTCACTCTGA CCCTACTTGA 60  
ACACTCCTGA ACAGTCATGT TTTNAAAAT NTTCTTTTAT ATCAAGTCAG AGAGTATACT 120  
40 TCTATAAATT TNACTCATGG ATGTTAGGAA ATCTAGTCAT CTTCCCTGTG ATTGCCCTGT 180  
TAAGTATTTA ACCATAGCTA TCATGTGTTT CCCAAATCTT CTCTAGATTA AATATCTTCA 240  
GTTACTTCAA A 251

45 SEQ ID NO:3212  
SEQUENCE LENGTH:250  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03783  
50 SEQUENCE DESCRIPTION:

55

5 GATCTAGACT GAGAATCAGC CTGAGCTTTA CACAGCTGGG GTCTGTTACT CGCGTTTTGT 60  
AGACTTTTGT GTAACATTTT GTACCGTAGA CAGAATGTGA GGAGGAAGTA ACACACAGAG 120  
GAGGATGTGT GTGTATGCAT GTGTTTGAAT TCACAAGGAA GAAATTATTT ATCTTGAGCT 180  
TTTTCTTTG TTATTCAATT TCTATTGATT TATTAGTAAT AACAAATGATA ATAAAATGTA 240  
AATGAGCAAA 250

10 SEQ ID NO:3213  
SEQUENCE LENGTH:250  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03784  
SEQUENCE DESCRIPTION:  
15 GATCTAACGT GTTCCAGTGT CTGTCTGAGG TGTCTTAAAA AATCAGAACA AAACCTTCTAT 60  
TATCCAGAGT CATGGGAGAG TACACNCTTT CCAGGAATAA TGTTTGGGA AACACTGAAA 120  
TNAATCTTC CCAGTATTAT AAATTGTGTA TTTAAAAAAA AGAAACTTTT CTGAATGCCT 180  
ACCTGGCGGT GTATACCAGG CAGTGTGCCA GTTAAAAAAG ATGAAAAAGA ATAAAAACTT 240  
TTGAGGNAAA 250

20 SEQ ID NO:3214  
SEQUENCE LENGTH:250  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03785  
SEQUENCE DESCRIPTION:  
25 GATCATAGGT CTGGACACTC CATCCTTGCC AAACCTCTAC CAAAAGTGG CCTTAAGCAC 60  
CGGAATGCCA ATNAACTAGA GACCCTCCAG CCCCCAAGGG GAGGATTGG GCAGAACCTG 120  
AGGTTTTGCC ATCCACAATC CCTCTACAG GGCCTGGCTC AAAAAAGAG TGCAACAAAT 180  
GCTTCTATTC CATAGCTACG GCATTGCTCA GTAAGTTGAG GTCAAAAATA AAGGAATCAT 240  
ACATCTCAAA 250

35 SEQ ID NO:3215  
SEQUENCE LENGTH:250  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03786  
SEQUENCE DESCRIPTION:  
40 GATCAAACTG CCATTCACAG TGTAAGGCAG CACTTAAATT TCGAACCTAA AGTTTAGATG 60  
CATTGTATAA AAAAACCTAA AAGCAGTATC TGTTNNTNNN GCTGTAAACC AAGTTGGAAG 120  
CTATTCGGAT AATTCTTAA ATATTGATGA NCTTTGGAGT ACTGTTTCTN CCTTCAAAC 180  
GAATGTAATT AATNCATGAT TAAATGCACC TNATATGTTT AANCAATCTT TGTATACTN 240  
TGGGNTTTN 250

50 SEQ ID NO:3216  
SEQUENCE LENGTH:252  
SEQUENCE TYPE:nucleic acid

55

TOPOLOGY:linear

CLONE:HUMGS03787

SEQUENCE DESCRIPTION:

GATCGCCACA CTGCCACTCT GCTGCCCAGC CACCAGGATT TCTGCCTGGA GCCCTTTGCC 60  
 CTGTCCCTGC TGCCTGAGGT GGCCTAGAGC AGAGGAGAAG AATTGCTCC AGGCCAGGAG 120  
 CACAAATCGT TGTTCATGA ATTTNTCTCC AACTCGACCT TGGTAAACGG AAATNTTGGG 180  
 GGTGAAGAGA AACAATCACT ATTTTNTCT TTTTATCTG GTAAATAATT AAAAGAAAAA 240  
 CCGAACACTA AA 252

SEQ ID NO:3217

SEQUENCE LENGTH:336

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03788

SEQUENCE DESCRIPTION:

GATCTGTATT GGATAAGGAC CAATGNACAG CAAAGCAAAA ATGGCTTTAA AGCTTGGTGT 60  
 TACTTTTNTT AAGTTGTTTA ATTATAGTTA AGCAATTTC AAAAACTCC AAAGAAATGT 120  
 GAAAGGACCT TTTGTCACAG CACTTCAGAA AATACACAAC AGCCCTTCT GCCCCGCAC 180  
 AGAAATGCTG CAGAGTATAT AAAACTTGAG ACATTTTGT AGGATGCCTG ACGAGGTGTN 240  
 GCCTTTTATC TTGTTCCGG ATGCATATT ATTACGAGTA CTCTGGTTAA ATATTGAAAA 300  
 GTTATATGCT GTAGTTTTTA GTATTTTGT TTTGTN 336

SEQ ID NO:3218

SEQUENCE LENGTH:227

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03789

SEQUENCE DESCRIPTION:

GATCTCGAGT GTTATTTTCT GATTGTGGTG TTGAGAGTTG CACTCCCAGA AACCTTTTGA 60  
 GAGATGCATT TATAGCCCTA GGGGTGGTAT GACCCAAAGG TTCCTCTGTG ACAAGGTTGG 120  
 CCTTGGGAAT AGTTGGCTGC CAATNTCCCT GCTCTTGGTT CTCCTCTAGA TTGANGTTTG 180  
 TTTTCTGATG CTGTTCTTAC CAGNTTGGGA AAAAAGTGTG GATTAAA 227

SEQ ID NO:3219

SEQUENCE LENGTH:248

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03790

SEQUENCE DESCRIPTION:

GATCTGCATA GAAAATTTT ATACAATTTT TTGAAAGTCC TTAGGTGAAA CATTTACCCA 60  
 TTAAGGAGGA AGCAGAAATA CTGAGACATG AAAGGCATTA TCAACTAACT CTAGACTCTA 120  
 GAACCCATTC TNGCATATCT CACGTGCAAT TTTTAAAAAT AAGTTAATAA TTCANCTCAT 180  
 ATCAACAAAA GCCTTTGNNA CATGGGTTT CACTNGATAT CACCTAGTGC TNANGNTAGA 240  
 NGCCAANN 248

SEQ ID NO:3220

SEQUENCE LENGTH:245

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03791

SEQUENCE DESCRIPTION:

GATCCAGTGC TCTCCCATCT AACAACTAAA CAGGAGCCAT TTCAAGGCCG GAGATATTTT 60  
 AAACACCCAA AATNTTGGGT CTNATTTNNA AACTTTTAAA CTCCTACTG ATGATTCTNA 120  
 CGCTAGGCCA ATTTTCCAA ACACATAGTG TGTGTNTTT GTATACACTG TATGACCCCA 180  
 CCCCAATCT TTGTATTGTC CACATTCTCC AACAATAAAG CACAGNGTGG ATTTAATTAN 240  
 GCAAA 245

SEQ ID NO:3221

SEQUENCE LENGTH:244

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03792

SEQUENCE DESCRIPTION:

GATCCACCCG CGTTGGCCTC CCAACGTGCT GGGATTATAG GCGTGAGCAC CACGCCCCGC 60  
 CTAATAATCCA TATTCAAAGA AGCAATTTCA GTTCCTTTCT AAGCTTTGTC AGTCAAGGGG 120  
 CTCCACTGAC TTCCTAGGCC CTGTAATTTA ACCAGTCTT AAGGTTTTGC AGGAAAGTCC 180  
 CTTCTTCCAA GTGGTTTTTC CAAATCGCAC AATGGCAAAG CCAAACAGAG GAAGAAACAT 240  
 TAAA 244

SEQ ID NO:3222

SEQUENCE LENGTH:244

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03793

SEQUENCE DESCRIPTION:

GATCAGATTG CTGAAACACT ATGGGAACAG GTATTGAAGC CCCTGGGTGA TAATNTAATG 60  
 GAGGAAAACA TAAGGCAGTC TGTAACAAAC TCTATCAAAG CAGGCCTGAC TGACCAGGTG 120  
 TCTCATCATG CCAGATTAAA GACAGACTGA CAGTTCATCT CCTCACGGAC TCCACTCTCT 180  
 TTTTTTTTNA TGCTTGCTGT ACAATGAGAA CTCAAATAAA ANTAAACCAA AGTTTACAAT 240  
 CAAA 244

SEQ ID NO:3223

SEQUENCE LENGTH:246

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03794

SEQUENCE DESCRIPTION:

GATCCAGGAG GAGCAGCACC CGAGCCCTGG AGTGGCCCAG TACCCCTCCA AGAGGCCACA 60  
 GTCCCAGCCA GGACAAAGTA TCGGCCCAT CCTGGTGCGN CAGGTGGGAC AATGTGAACA 120  
 TGGACTCGAA GACATGGCCC TTTCTCTGTA GTTGATTTT TAAATGTGCC ATTATTGTTT 180

EP 0 679 716 A1

TTAAAAAANN CGGNAAAANG AAANGCANAC AAATAAAACA CCTTTAAGAG GCTTGAANGC 240  
GNCAAA 246

5 SEQ ID NO:3224  
SEQUENCE LENGTH:243  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03795

10 SEQUENCE DESCRIPTION:  
GATCATAACT CATGAATATG TTTGTAATCA TGGTAATTGA GATTTTNATG AGGAATGAGT 60  
ATCTGGAAAT ATTGTAGCAA TACTTGGTTT AAAATTTTGG ACCTGAGACA CTGTGGCTGT 120  
CTAATGTAAT CCTTTAAAAA TTCTCTGCAT TGTCAGTAAA TGTAATATAT TATTGTACAG 180  
15 CTACTCATAA TTTTAAAG TTTATGAAGT TATATTTATC AAATAAAAC TTTCCNATAT 240  
AAA 243

SEQ ID NO:3225  
SEQUENCE LENGTH:241  
20 SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03796

SEQUENCE DESCRIPTION:  
25 GATCTGACCT TTTTTTCCA GTTGAAATGT ATTAACACAC CTTCCACAAT NATTTTATAA 60  
GAGTCAGCAT AACATAGTGG ATAAGAACTG TGAGATGTTT AACCTCTCAG TAACTCGGTT 120  
CTCTCATTAT AAAATAGGAA TAAATCAGT ACCTGTTTCA TATGAAGGTC GTTCTGAGA 180  
ATTAATGGA CTAATGTATG CAAAAGCCT GGCAACAAT AAACACTCAT CTGACTTTAA 240  
A 241

30 SEQ ID NO:3226  
SEQUENCE LENGTH:240  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
35 CLONE:HUMGS03797

SEQUENCE DESCRIPTION:  
GATCAAAATA TATTGTCCA GAAACTCTTG GGCCAGTTCT CTGAGAAGGA ACTGGCTGCT 60  
GAAAAGAAAC GCATCCTGCA CTGCCTGGGG CTTGCAGAAG AAATCCAGAA ATATTGCTGT 120  
40 TCAAGGAAGT AAGAGGAGGA GGTGATGTAG CACTTCCAAG ATGGCACCAG CATTGGTTTC 180  
TTCTCAAGAG TTGACCATT TCTCTATTCT TAAAATTAAT CATGTTGGGG AAACAAGAAA 240

SEQ ID NO:3227  
SEQUENCE LENGTH:239  
45 SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03798

SEQUENCE DESCRIPTION:  
50 GATCCTCCCA CCTNCAGCCT CCCAAGTAGC TGGGACTACA GGCACATGCT ACCATGCCCA 60

55

GCTAATTAAA AAAAATTTT TTTTGTAGA GACGGAGTTT CACTGTGTG CTCAGGCTGG 120  
 TCTTGAAGTC CTGAGTTCAN GCAACCTCC ACTTCAGCTT CCCAAAGTGC TGGGATTACA 180  
 GGCATCACTG GCCCAGGCAG AGCCAATTNT GTATAATAAA TCTGTNTCTC TCTGTCAAA 239

5

SEQ ID NO:3228  
 SEQUENCE LENGTH:238  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear

10

CLONE:HUMGS03799

SEQUENCE DESCRIPTION:

GATCAAATTT NATTGAATGG TTTGAGGTG TAGCTCTATA AATAGTAGTT TTTAACATGC 60  
 CTGTAGTATT GCTAACTGCA AAAACATACT CTTGTACAA GAGGTGCTTC TAAGANTTTN 120  
 ATTGACATTA ATGACACTGT ATACAATAAA NGTGTAGTTN CTNAATCGCA CTACCTATGC 180  
 AACACTGTGT ATNAGGTTTA TCATCCTCAT GTATTNTNNT GTGACCTGTA TGTNTATN 238

15

SEQ ID NO:3229  
 SEQUENCE LENGTH:237  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear

20

CLONE:HUMGS03800

SEQUENCE DESCRIPTION:

GATCCAAAGC CATCCCAGAC CTTCCTCCTT GGCAGATGAC TCTCCCCGCT 60  
 TCTGCGTCCT GCCTGCCCAT TCATACCAGT TTGAACTGCA ACAGCCTAGC TCCTCACCTG 120  
 TGCACCTCCT TCCCCAGGTG TGCACGTCTC CAGCCCCGAG CGCGTGTCTT CCTGCTCATC 180  
 TGGGTTTCCT GGGCAAATAG TGGCCCTCAA TAAATNTTGT CTGAGTGAGA ACATAAA 237

25

30

SEQ ID NO:3230  
 SEQUENCE LENGTH:515  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear

35

CLONE:HUMGS03801

SEQUENCE DESCRIPTION:

GATCGCCAGA GCCCAGGAGT TTGAGGCTGC AGTGAGCTAT GAGGGTGCCT CTTTGCTCCA 60  
 TCCTAGGCAA CAGAGTGAGA CGCTGTTTAA AAAGGAAAAA ATCCTTCNT AGAGCTAGTA 120  
 TCCTAAAGCT GCAGAGCTAG CCCATGACCT CATTGGTTTC NTTGTCCTTG GGGTGCTTTT 180  
 CCTGAATCTT TGGGGGTGAA GGGAGTNTTG CTCCAGTCC AGAGGCTGA TTCCTTTCGG 240  
 ACTGGGTCT CAAGACACGA CCAGTTCTC AAGACACGAG TCCCCTTNTT CCTNCCCATT 300  
 AAAGGGGGTT TNTNAGAAGC AAGANCAGCC CCTTCCCA AGTCACAGCC TGAAGGGAGG 360  
 CCCNGAGAN GCTTCCCTCC TTTCCCNCA CCTGNTTCC TTAACCTTNT TTTGNCCCTG 420  
 NTTTTTTAG GAANCTGGNA GTTCAATTN GTTTTAAANG GGGGATTGGG GGGGAAGGGA 480  
 AGNCTTNGGG GGACAAAAA NNTTTTNTT NCAAN 515

45

50

SEQ ID NO:3231  
 SEQUENCE LENGTH:227  
 SEQUENCE TYPE:nucleic acid

55

TOPOLOGY:linear

CLONE:HUMGS03802

SEQUENCE DESCRIPTION:

5 GATCAGTGTA TGCGAAAAGG TTTTtagGAA GTATGGCAAA AATGTTGTAT TGGCTATGAT 60  
GGTGACATGA TATAGTCAGC TGCCTTTTAA GAGGTCTTAT CTGTTcAGTG TTAAGTGATT 120  
TAAAAAAATA ATAACCTGTT TTCTGACTAG TTTAAAGATG GATTTGAAAA TGGTTTTGAA 180  
TGCAATTAGG TTATGCTATT TGGACAATAA ACTCACCTTG ACCTAAA 227

10 SEQ ID NO:3232  
SEQUENCE LENGTH:224  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear

15 CLONE:HUMGS03803  
SEQUENCE DESCRIPTION:  
GATCACTAGC TAACTNCTCAT ATCCATGCCT TTTTGTcCTG TTTACAGTCT TAAAAGAGGT 60  
AAAAcAGCAA ATATTTTTTN AAGGGAActA TAACCTTAGG ATTCCTGAAA ANAATTTCAA 120  
AAAAAAAATA AAGACACTGT TGCCAATGTG NCCCAAAAct TAAGACCATA CTAATGGCAT 180  
20 ATATTTGTNA CAATNAAAAA TTAANTTTAC TACTTAATCC TAAA 224

SEQ ID NO:3233  
SEQUENCE LENGTH:310  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03804  
SEQUENCE DESCRIPTION:  
GATCGGTGCT TTGTGTAAAT ACATCTTTAA CATTGGGGTG GAGAGGGGCC TTAAGAAGGA 60  
30 CAGTTCATTG TAGGAAAGCA ATTCTGTACA TGAGTTTAAG CATTCTGTT GCATTGTCTC 120  
TGCAGATTCT ATTTTGT TT ACAATATTAA AATGTATGTN AGCAAAATGG GTGGATTTC 180  
AAATAAAATG CAGCTTCAC AAAAGTTTG TNATGGTATT CTGGTCTGAG ATGCATTNC 240  
ATTTTNCCTN TCTCTNTTA TTATCAATAT TGTNATTTT CCCTAATAAA ATATACCCAG 300  
35 GTGNATTAAA 310

SEQ ID NO:3234  
SEQUENCE LENGTH:220  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03805  
SEQUENCE DESCRIPTION:  
GATCAAAATT TTNAGACAAT CTTGGTCTG GATTGGTTAA TGAAATNTN TTGTTTAAGA 60  
45 GGTTCATTAA AAAAATATT CTAGTGTATT AGTCATAATT NTTTTGTGG AGTGGGGGTA 120  
AACCACACCA TTAAGGGAAT AAAATGTAAT TTGAAAGAGG TGATTATAAG ATTTGTTCA 180  
GGCCCCAAAA TATAAATAAA AATTGGTGTG GAATCTCAAA 220

SEQ ID NO:3235  
SEQUENCE LENGTH:219

55



SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03806

SEQUENCE DESCRIPTION:

GATCGATACA GAGCATCTGC ACTGGGATTG TCCGCCCCGC CTGTCAGGGA GGCCTCGGGG 60  
GCTAATNGAG CTGAGGGTAT AGTCGGCCTT GGACCCTCGC TTTTTCCTT TCCTGTACTA 120  
TNAAGATAAC TGCCTTATCT CCCCTCAGG ACTGTTTTGG GGATTAAATA GGACGTTTAA 180  
ATNACCAACG CTCTTTGAAA TAAACATTTC AAAATTAAA 219

SEQ ID NO:3236

SEQUENCE LENGTH:219

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03807

SEQUENCE DESCRIPTION:

GATCAAAAAA ACTTTTCTTC TTTTGCAAAG AAAGCTTTT GTTTTAAACN GCAACGTACT 60  
TTTCCCCTAC CTTGAAGAGA CATGGTGGTC GCAGCTTCTN ATCTATATGA AAAAGTTTTT 120  
GATGTATTGG AATNATTTGG GAATGCTTTT AAAACAATT GTAATTATTT CTTTACAAAC 180  
CAAAACAGAA CAGAAAGGTG TGGTGTGGA ACATCGAAA 219

SEQ ID NO:3237

SEQUENCE LENGTH:265

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03808

SEQUENCE DESCRIPTION:

GATCTGCATT TTCAGAAGAG GACAATCAAT TGAACTAAG TAGGGGTTTC TTCTTTTGGC 60  
AAGACTTGTA CTCTCTCACC TGGCCTGTTT CATTTATTTG TATTATCTGC CTGGTCCCTG 120  
AGGCGTCTGG GTCTCTCCTC TCCCTTGCA GTTTGGGTTT GAAGCTGAGG AACTACAAAG 180  
TTGATGATTT CTTTTTATC TTTATGCCTG CAATTTTACC TAGCTACCAC TAGGTGGATA 240  
GTAAATTAT ACTTATGTTT CCAA 265

SEQ ID NO:3238

SEQUENCE LENGTH:217

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03809

SEQUENCE DESCRIPTION:

GATCTACTAT AAGGTATTCT ATATTATAT NACTTCAGAG ACGCGTATGT AATAAAGNAC 60  
GCCCTCCCTC CAGTGTCCAC ATCCAGTTCA CCCAGAGGG TCGGGCAGGT TGACATATTT 120  
ATTTTGTCT ATTCTGTAGG CTTCCATGTC CAGAATCCTG CTTAAGGTTT TAGGGTACCT 180  
TCAGTACTTT TTGCAATAAA AGTATTCCT ATCCAAA 217

SEQ ID NO:3239

SEQUENCE LENGTH:217

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03810

SEQUENCE DESCRIPTION:

GATCGGTGCT ACCAAGGAAG AGAGCACACA GATAAGACAG AGGGGAGGAG GTGGGCATT 60  
 CCTACATTCC TCCTTGTTN CCGCTGCTGA NATTCAGTA TTTATTGCAA TNTAAATNTA 120  
 TCCTGAAGGT GGGGAGGAAT GTTAAANCTA CCAATNTCCGT GTGTCATCTT GGTNTGTTTT 180  
 TNTCCCTGTT TGTAGCAAGA CTCTNATGAT AATNCTN 217

SEQ ID NO:3240

SEQUENCE LENGTH:217

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03811

SEQUENCE DESCRIPTION:

GATCTATATG AAGTGGGAAT ACAGCATATA TCTGGATATT CTTATAGTTA TCTTTTAAAC 60  
 ATCTTATTTT TTTCATTAAT TACATATCAA CATTAAATNTT GTATCTNGAA GCAAATNGAT 120  
 TTTGTATAAT TAAATGTGTC AAGCATCTGT ATTAATTGAT TNGATGGCAT AAGGTATGAA 180  
 ANTANTGTAC TGCCCCATGT ATNACTGTTC CAACCAN 217

SEQ ID NO:3241

SEQUENCE LENGTH:214

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03812

SEQUENCE DESCRIPTION:

GATCATAAGA CCAGGAGTTC AAGACCGGTC TGGCCAACAT GGTGAAGCCT CATTNTACT 60  
 AAAAATACAA AATNAGCCAG GTGTGGCGTC ACATGCCTGT AATCCCAGCT ACTCAGGAAG 120  
 CTGAGGCAGG AGAATTGTTT GAACCTGGAA GGTGGAGGTT GCAGTGAGCC GAGATTGTGC 180  
 CACTGCACTT GACAGAGCGA GACTCTGTCT CAAA 214

SEQ ID NO:3242

SEQUENCE LENGTH:214

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03813

SEQUENCE DESCRIPTION:

GATCATCGAG GACGAGAAGA TGGTGGTGGT GGCNGTGCAG CCGACTGCAG AGCTNGAGGT 60  
 GGGCTCGCG GAGGTCATTG TGGAGTCCCT GGCCAGGGN GGCCTGGCCT CCCAGCTCCC 120  
 CGGCCAGAGA CTGTGTGCAG AGNAGAGCTT CACCGGCCAG GTGTCCTGGA GCCCTCCCTC 180  
 ATNATNACAG CTGCTGTCCC CGAGGACTGT GATN 214

SEQ ID NO:3243

SEQUENCE LENGTH:212

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03814

SEQUENCE DESCRIPTION:

GATCTGGGGA GCTNTGACTG AAGGGGCTTG GTCTTCCACT CAGCATCAGC NTGGCAGTCA 60  
 CCACCCAGT NAGGACCTCG ATGTCCAGCT GCTGTCAGGT CTGATAGTCC TCTGCTAAAA 120  
 CAACACGATT TACATAAAAA ATCTTACACA TCTGCCACCG GAAATACCAT GCACAGAGTC 180  
 CTTAAAAAAT AGAGTGCAGT ATTTAAACCA AA 212

SEQ ID NO:3244

SEQUENCE LENGTH:211

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03815

SEQUENCE DESCRIPTION:

GATCTCTGTA GACTAGAGTC TTGCAGCAAC ACAGAAATGTA ATATAAGGCA AATGCATCTG 60  
 GGACTTGACC AAAGTTGTTT TGTTTTGTTC TTTTAACTGA AAGTAACAGA AGGACCTTTC 120  
 TTAAATGTGA CAGATGGTCC TGCAGTGTGA ACCTGAAGGA CAGTGTAAAA GCTGGGCTCT 180  
 AGTATATTGA TGATTCTGTC ATAAGTGTGG N 211

SEQ ID NO:3245

SEQUENCE LENGTH:210

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03816

SEQUENCE DESCRIPTION:

GATCTATTTT TGCAGTGGAA TATCTGAGAA TTGCAAACT AGACAAAAGT TTCACAACAG 60  
 ATTTCTAAGT TAAATCATTT TCATTAAAAAG GAAAAAAGAA AAAAAATTTT GTATGTCAAT 120  
 AACTTTATAT GANGTATTAA NNTGCATATT TCTATGTNGT AATATANTGN GTCACAAANT 180  
 AANGCTGTGA CAGTNTCTGT GGTCTACAAA 210

SEQ ID NO:3246

SEQUENCE LENGTH:210

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03817

SEQUENCE DESCRIPTION:

GATCTTTTAC CACTAAAAGA GCATTATTCT CATGTCATAA TGAGAATAAT AATTACATA 60  
 CTTGGCATAA TAAATGCCTA AAAGACATTT TATTNTCTGA ATCTATTTT TTCTTGCTAT 120  
 AATGGGGATA TTGTAAATAA TGCATTGTGA TTAATGGTAT TTCTTAAAGC AATCTATGTA 180  
 ACTGTAAATT AAACCAATCT ACAAACTAAA 210

SEQ ID NO:3247

SEQUENCE LENGTH:210

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

EP 0 679 716 A1

CLONE:HUMGS03818

SEQUENCE DESCRIPTION:

5 GATCAGAAGT GGCTAATTTA TTTNATTTCT NATTATTTTA TCCAGAGGGT ACTTTTTTAA 60  
 TGGATATTTG TAAATCTNCC ACTTAACCAC TGAAAAATAAT NTTNTTTTAA TCCCACCCTT 120  
 CCATCCATAC CTCTGCCTCC CCAAAAAGCT CCTATNAATT TNCTTATCCC CCTCATGTAG 180  
 CTAGTTGAAT GTGAATAAAT AACATGGAAA 210

10 SEQ ID NO:3248

SEQUENCE LENGTH:206

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03819

15 SEQUENCE DESCRIPTION:

GATCTCCATT CTTTGCCATG AGGGCCAACA CATGAGACCC CACCTCCCTC CCTGCCTGCC 60  
 AGCCCTAGAC TTGTTGGAGC ATAGAGCCCT TCCTCCCCAG GCCTAAGTAT GTGGAGCTCT 120  
 GCTTTGGCAC TGCCCCGCAG AGGCCACGCC TATTTATTCT GTTCTNTTG TTTTGTTTTT 180  
 20 AACAACTATA CTTTGCACAC ATGAAA 206

SEQ ID NO:3249

SEQUENCE LENGTH:209

SEQUENCE TYPE:nucleic acid

25 TOPOLOGY:linear

CLONE:HUMGS03820

SEQUENCE DESCRIPTION:

30 GATCCCCAGA GTTGGTCCAA GGAGGGAGAG TGGGTTCTCA ATACGGTACC AAAGATATAA 60  
 TCACCTAGGN TTACAAATAT TTNAGGACT CACGTAACT CACATTTATA CAGCAGAAAT 120  
 GCTATTTTGT ATGCTGTAA GTTTTCTAT CTGTGTACTT TTTTTAAGG GAAAGATTTT 180  
 AATATTAANC CTGGTGCTTC TCACTCAA 209

35 SEQ ID NO:3250

SEQUENCE LENGTH:335

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03821

40 SEQUENCE DESCRIPTION:

GATCTGTGTG GTCCCCGACG TAACATCTGG CGAGACCCTG CCCTCTGCTG TTACCTGAGT 60  
 CCTGGGGATG AACAGGTCAA CTGCTTCAAC ATCAATTATC TGAGGAACGT GGCTCTAGTG 120  
 TCTGGAGACA CTGAGAACGC CAAGGGCCAG GGGGAGCNGG GCTCAACTGG AGGAACAAAT 180  
 ATCAGCTCCA CCTCTGAGCC CAAGGAAGAN TGAGTCACCC CAGAGCCCTA GAGGGTCAGA 240  
 45 TGGGGGGAAC CCACCCTGCC CCACCATCT GANCACTCAT TACACTAAAC AACTTTTTGG 300  
 GNAANTNTNA TNTATGATGN GNNGNGNGTG GGGAN 335

50 SEQ ID NO:3251

SEQUENCE LENGTH:207

SEQUENCE TYPE:nucleic acid

55

TOPOLOGY:linear

CLONE:HUMGS03822

SEQUENCE DESCRIPTION:

5 GATCTAATTC TNCACCTCTG CTCCAAGGGC TGGGCTGTGG GTGGGATACT GGGATTTTGG 60  
 GCCACTGGAT TTTCCTTAAA TTGTCCCCC CTTTACTCTC CCTCTATTTT NCTCTCCTTA 120  
 GACTCCCTCA GACCTGTAAC CAGCTTTGTG TCTTTTNCCT TNTNCTCTCT TTAAACCAT 180  
 GCATTATAAC TTGAAAGCA AAACAAA 207

10

SEQ ID NO:3252

SEQUENCE LENGTH:201

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

15

CLONE:HUMGS03823

SEQUENCE DESCRIPTION:

20 GATCTCATTT NAATGATTTA TAGGTAAATA CTAATCAGAC ATTATTAAAA GCAAAACAGG 60  
 AAAAAGGTAA ACTTCTTAAA TTTAGTTACC TATAAAAATT GTCAATNTTN ATTCTTTAAA 120  
 AACACATGGA CTTACTATAA AAGCCTTTT GTACTAGTGA AAAGAATCTT CAGCTATATA 180  
 GAAATAAAGT TATACTTTAA A 201

SEQ ID NO:3253

SEQUENCE LENGTH:201

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

25

CLONE:HUMGS03824

SEQUENCE DESCRIPTION:

30 GATCCCTAAA AGACAAAAGA GTCTTGAAA GGAAGTCTGG CTTCGTCTTG AACGTTGCGC 60  
 CCATCACCAG TGTGAGTCCG TGGGGAAGTC TTCCTCAAGT GGGGTTCACT CTGTAATTTT 120  
 CCTGTCTGTT CTTAGCNNG TTCTGAGTTA TTTTGGATTT TTTCTTTAG CCAAATAAAG 180  
 GCAGTGTGGT TTTACCTGAA A 201

35

SEQ ID NO:3254

SEQUENCE LENGTH:200

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

40

CLONE:HUMGS03825

SEQUENCE DESCRIPTION:

45 GATCCTAATG GTGCTGCCCT ATTTATACCT GGGTCTGCAT TAAAAGGGAA AGCCCCCCT 60  
 GTTGTAGATT TCATCTGCTT CCTCCTTAGG GNAGGCTGGG ATATGATGAG AGATTCCAGC 120  
 CCAAGCCCGG CCCCCACCG CCAGGCCATA GGGCATANTT TGCATCTCAA ATCTGAGGAA 180  
 TAAACTGATG ACCTGTGAAA 200

SEQ ID NO:3255

SEQUENCE LENGTH:391

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

55

CLONE:HUMGS03826

SEQUENCE DESCRIPTION:

5 GATCAAGCAT TTGCGTTTGG ATGGCAATCG CATCTCAGAA ACCAGTCTTC CACCGGATAT 60  
 GTATGAATGT CTACGTGTTG CTAACGAAGT CACTCTTAAT TAATATCTGT ATCCTGGAAC 120  
 AATATTTTAT GGTATGTTT TTCTGTGTGT CAGTTTTCAT AGTATCCATA TTTTATTACT 180  
 GTTTATTACT TCCATGAATT TAAAAATCTG AGGGAAATGT TTTGTAAACA TTTATTTTTT 240  
 TTAAGAAAAA GATGAAAGGC AGGCCTATTT CATCACAAGA NCACACACAT ATACACGGTT 300  
 10 AGACATCAAA CTCAATGCTT TATTGTNAA TTTAGTGGTT TTNTATTCT ACTGTCAAAT 360  
 GATGTGCAAA ACCTTTTNC CGGGTTGCAT N 391

SEQ ID NO:3256

SEQUENCE LENGTH:194

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03827

SEQUENCE DESCRIPTION:

20 GATCTTTAAT TTGNATGGTG ATGAATGTCT TAGTCATGAA GAGTTTCTAT GGGGTGTNAA 60  
 AAAACAGAAT GCATCGAGGT TNATGGGTAC CACAACATCA GAGTATACAA GAATACTGGA 120  
 AGTGTGTGAA GAAAGAAAGC ATTAAGGAG TAAANGANGT CTGGAAACAN GCTGGAAANG 180  
 GTCTTTTNA ATNN 194

SEQ ID NO:3257

SEQUENCE LENGTH:190

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03828

SEQUENCE DESCRIPTION:

30 GATCTAGTAG GTTCTATTT TTCTTTCTC TTTACAATGC ACATAATACT TTCCTGTATT 60  
 TATATCATAA CGTGTATAGT GTAAAAATNG AATNACTTTT TTTGTGAATG AAAATCTAAA 120  
 35 ATCTTTGTAA CTTTTATAT CTGCTTTTGT TTCACCAAAG AAACCTAAAA TCCTTCTTTT 180  
 ACTACACAAA 190

SEQ ID NO:3258

SEQUENCE LENGTH:190

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03829

SEQUENCE DESCRIPTION:

45 GATCCCCTTT TNTNCTGGAG CTTCCGTGCC TCCCCTGCCT CTTCCAGCC CTTGTAATCC 60  
 TCCTTCACAG GCCAGCCAGA TACCTGTNTG GCCTNTGGGC CCATTTTNTT CCCTGTCTGT 120  
 CCCCACCCA CAAGAACCAG GTTCTNTAA TAAATTCTCT CCCTTCTTA GCCAGGACTT 180  
 AGCCCGCAAA 190

SEQ ID NO:3259

SEQUENCE LENGTH:189

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03830

SEQUENCE DESCRIPTION:

GATCTNAGAG CCTGCCCCAAC AGCAGGGAAG CCAAGCACCC ATTCATCCCC CTGCCCCCAT 60  
CTAACTGCGT ANTGANAAGG GGAACAGTGC CATGTACCAC ACAGATGTTT CTGTCTCCTC 120  
GCATGGGCAT AGGGACCCAT CATTNATGAC TGATGAAACC ATGTAATAAA GCATCTCTGG 180  
GGAGGGAAA 189

SEQ ID NO:3260

SEQUENCE LENGTH:188

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03831

SEQUENCE DESCRIPTION:

GATCCCCCTT CTATCAATCA CCTGATAGCA ACAGGGACAG CTGCCAATAC CCTGCTCTTT 60  
ACTCAATGGT ACCCAGGGAG GGAGCATGGG AAGAGGGTGA GCTGAGGGCT GGAGGAGGGC 120  
AACAGCCACT GGGTGAGCTG TTCACGGTCT TATACTATTG TTTGTNATTA AAAGTGCTTC 180  
AACCCTAAA 188

SEQ ID NO:3261

SEQUENCE LENGTH:184

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03832

SEQUENCE DESCRIPTION:

GATCAACAAG GCCACGCCCT ACAACTACCC AGTGCCCGTC CGTGATGATG GGAACATGCC 60  
CGACGTGCCC AGCCACCCCC AGGACCTCA GGGCCCCAGC CTGGAGTGGC TGAAGAAACT 120  
GTGAGCACCT CCACTGACAG AGGCGGCCCC TCCCACGGNT CCCAATAAAA ATGTGAAAAC 180  
CAAA 184

SEQ ID NO:3262

SEQUENCE LENGTH:184

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03833

SEQUENCE DESCRIPTION:

GATCCACCAA TGTTTCAAAT AGGACTATAA CTTATTCAAA GGCCAATNAT ACTTCGCATA 60  
ATTCAATTTT AATATTATTC ACATTTTCATG TCACAAATTT AGTAAGTTAC ATGTGTTATG 120  
TGATGTTTTG TTTTGATAGA TTATATCTTA CTCCTAAATA AAANGTCAAG ATTTTTGTAG 180  
CAAA 184

SEQ ID NO:3263

SEQUENCE LENGTH:181

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03835

SEQUENCE DESCRIPTION:

5 GATCTCTCTG TGTGGAATGC CTTGGTGAGA GAGATGCTTA TAATNACTAT NATNATTCT 60  
AACCAAGCTT CTATNAATNT AATTCTAAT AATACACTAT CTTGATTGTA CTCTCCAGAA 120  
AATTTTCTG TCAGTGAAAA TAAAAGAAAA ATTAAAGTAA AGCTAAGGAA CTGTCTATAA 180  
A 181

10 SEQ ID NO:3264

SEQUENCE LENGTH:180

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

15 CLONE:HUMGS03836

SEQUENCE DESCRIPTION:

20 GATCCCTGGA CCATCTGCAT CCAGAGGACC GTCCGTAACG GCCGGGGGTC CAGGCGGACC 60  
TTGTGGTGAC CCGGCTCGGG CNTNTCTCG GTTTCNTTGC CTCACCGCG GAGAGCGCTG 120  
AACTGGACA AGCAGCGGCT GGNAAGNACA GGTCCAATAA ACGCCCTCTG CGCCAGAAA 180

25 SEQ ID NO:3265

SEQUENCE LENGTH:227

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03837

SEQUENCE DESCRIPTION:

30 GATCTAGTTC AGAAGGAAGC AAAATCCCTT AATCTATGTG CACCGTTGGG ACCAATGCCT 60  
TAATTAAGA ATTTAAAAA GTTGTAATAG AGAATATTTT TGGCATTCTT CTAATGTTGT 120  
GTGTTTTTTT TTNGTGTGTN CTGGAGGGAG GGGATTTAAT TTNAATTNA AAATGTTTAG 180  
GAAATTTNTN CAAGGAANCT TTTTAATAAN GTATATNGAA AGNTAAA 227

35 SEQ ID NO:3266

SEQUENCE LENGTH:171

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03838

40 SEQUENCE DESCRIPTION:

GATCACTTCT CTTGGCTTC CTTCTTTTCT GTGCTTGCAT CAGTGTGGAC TCCTAGAACG 60  
TGCGACCTGC CTCAAGAAAA TGCAGTTTTT AAAACAGAC TCAGCATTCA GCCTCCAATG 120  
AATAAGACAT CTTCCAAGCA TATAACAAT TGCTTTGGTT TCCTTTTGAA A 171

45 SEQ ID NO:3267

SEQUENCE LENGTH:338

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

50 CLONE:HUMGS03839

SEQUENCE DESCRIPTION:



5 GATCACTTTA TTTGCTAGGG AGGGAAGTCC TAGGGTGGTT TCAGTTTCTC CCAGACATAC 60  
 CTAATTTTA ACATCAATCC TTTAAAGAA AATCTGTATT TCAAAGAATC TTTCTCTGCA 120  
 GTAAATCTCG CAGGGGAATT TGCATAATTA CACTTGAAAG TTGTTATTGT TAACCTTTTC 180  
 GGCAGCTTTT AATAGGAAAG TTAACGTTT TAAACATGGT AGTACTGGAA ATTTTNCAAG 240  
 ACTTTTACCT AGCACTTAAN TATGTATAAN TGTACATAAN GACAANCTAG TAAGCNTGGC 300  
 CTGGGGANAT GGTCAAGCCT TGTNTTGTGT TTTTGGCN 338

10 SEQ ID NO:3268  
 SEQUENCE LENGTH:170  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS03840  
 15 SEQUENCE DESCRIPTION:  
 GATCATAGGA GAAAACCAT TCAATGACA AGAGCACCTC AAAGGCAGCA GCCTCAAGGA 60  
 GCAGCCATGG CCCAGACTT GTCGCACGGA TGCAGAAAAC TTAATGGAGG AGGCTGAGGT 120  
 CAGAAATGGA AGAGTTTTTA AAAAATAAAA AGGGGAGCTA ATATGTGAAA 170

20 SEQ ID NO:3269  
 SEQUENCE LENGTH:168  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 25 CLONE:HUMGS03841  
 SEQUENCE DESCRIPTION:  
 GATCAAGGGC AAAAAGTGGT CATTAAGTNA TCTAANATTA AATNATTTAG CCACTAAGTA 60  
 ATTTNTTTAC TCTNACTTTA AACTCACCAA AGAAGATTCT TTTAAAGAAA TTATGAAAAA 120  
 30 TGTACAATTT AACATTTTAA ATAANTAGTG ACAGANGTTG TTTATAAA 168

35 SEQ ID NO:3270  
 SEQUENCE LENGTH:167  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS03842  
 SEQUENCE DESCRIPTION:  
 40 GATCCTCTCG CCCAGCATT CCAAAGTGCT GGGATTACAG GTGTGAGCNA CTGCCTGGCC 60  
 TGGCCGTAGG TTTGTAAGT TTTATAGAA GAGCCCTGGA GAAGACAGTA GAATNAGCCT 120  
 ATCTAGTTTA AAAAATAAAG AAGCACGTTG ATTCACCAC CGCCAAA 167

45 SEQ ID NO:3271  
 SEQUENCE LENGTH:167  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS03843  
 SEQUENCE DESCRIPTION:  
 50 GATCAGCTTT GTTTTCCCA GAGTTCATGC AAATAGAATC TGGCTTCTNT AAGTNAGCAT 60  
 CATGGACTTG GTTNAAATC GCCCGTNTTG CTGAGTGTAT CTTAGCTTG TCCCTTTTAA 120

55

CTGACGAGTA GTATTCCACA GTNTGGATGC ACTGTATTNN NTTTATN 167

SEQ ID NO:3272

SEQUENCE LENGTH:166

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03844

SEQUENCE DESCRIPTION:

GATCAGAGCA TTGTGCAATA CAGTTTCATT AACTCCTTCC CCCGCTCCCC CAAAAATTTG 60  
AATTTTTTTT TCAACACTCT TACACCTGTT ATGGAAAATG TCAACCTTTG TAAGAAAACC 120  
ANANTAAAN TTGAAAANTA AAAACCNAA ACATTGCAC CAGAAA 166

SEQ ID NO:3273

SEQUENCE LENGTH:165

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03845

SEQUENCE DESCRIPTION:

GATCTNTTTT TTTCCCTTCT TGTATCATCC CTTTGGGTTT TTCGGTTTGC TTTGGTTTTT 60  
AATTTTNCCT TGTTTTNCCT ATAAATCCTG TTTTAATCTT ATAAGGGAAA ATNCATTTTN 120  
TTCAACTGTN CTAGTTAATA ATGAGAACTC AATTNCTGGA AATNN 165

SEQ ID NO:3274

SEQUENCE LENGTH:163

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03846

SEQUENCE DESCRIPTION:

GATCTCAGGA ATNACATTTT CCAACAGACC AAAAAATGTT TTCATGTAGC AGCAATGCAG 60  
ATTGGTGAA TATTAAATAT ATATTAAAGT ATGTATTTC CTTTATNACT GACAATNAAA 120  
AAATATTGTT TGGCCAAATA GTAAACACCC TTTTGAAACC AAA 163

SEQ ID NO:3275

SEQUENCE LENGTH:163

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03847

SEQUENCE DESCRIPTION:

GATCCCTTNG TTGCTTAAT AAATTATAAA ATAATGGCTT GGAAAAGCAG GCTAGTCTAA 60  
CCATGGTGCT ATNATNAGGC TTGCTTGTTA CACACACAGG TCTAAGCCTA GTATGTCAAT 120  
AAAGCAAATA CTTACTGTTT TGTTCCTATT AATGATCCCA AAA 163

SEQ ID NO:3276

SEQUENCE LENGTH:164

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03848

SEQUENCE DESCRIPTION:

5 GATCTGTTCT TGGTATTNN TTTGTTTTG TTTGGTTTT TAAATGTAAT CACCCATTGG 60  
 TCAGGCCCAG GACTGGTCAC CATGAGCTCT GCTAGCCACG GCCCCAACGA TGCTTCCGGC 120  
 TCTCATGGAT TCCACAGCAA ATAAACTGT GGTGACAACA GAAA 164

10 SEQ ID NO:3277

SEQUENCE LENGTH:162

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03849

15 SEQUENCE DESCRIPTION:

GATCTGGGGT CCCTAAGTCC CTCTCTTTAA AGAACTTCTG CGGGTCAGAC TCTGAAGCCG 60  
 AGTTGCTGTG GGCCTGCCCG GAAGCAGAGC GCCCACTCG CTGCTTAAGC TCCCCCAGCT 120  
 CTTCCAGAA AACATTAAAC TCAGAATTGT GTTTTCAGCA AA 162

20 SEQ ID NO:3278

SEQUENCE LENGTH:162

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

25 CLONE:HUMGS03850

SEQUENCE DESCRIPTION:

30 GATCCTAGGA ACTCCTATNT TCAGAAAAGA ATTTTNTTCC TACTATATAA TTACAGTATT 60  
 TAGCTGTCAA TTTTAAGATG AATTGGTAG AGCCTTATAG TAAAGNATGT ATCTGGTCA 120  
 CACACAAAGC TTGGAAAAAG TAAAGATGT CTAAACCATA AA 162

SEQ ID NO:3279

SEQUENCE LENGTH:160

SEQUENCE TYPE:nucleic acid

35 TOPOLOGY:linear

CLONE:HUMGS03851

SEQUENCE DESCRIPTION:

40 GATCAAGAAG TAGCCGAGGT TGATAAAAAC ATAGAACTTT TGAAAAAGAA GGATGAAGAA 60  
 CTCAGTTCTG CTCTGAAAAA AATGGAAAAT CAGTCTGAAA ACAATGATAT CGATGAAGTT 120  
 ATCATTCCA CAGCTGCTCA ATAAAGTACA AGAGCTTAAA 160

SEQ ID NO:3280

45 SEQUENCE LENGTH:177

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03852

SEQUENCE DESCRIPTION:

50 GATCGTGGGT CAGGGACACC GAGAGAGTGA GGTCACCTCC ACTTCAAACC TTCAGTGAGG 60  
 GGGTGGGATG GAGAGAATGC TGAATCTTT TTTNACGGG ATGGGGTTTT CNTCTTTGTA 120

55

ATTATNNCTT TAGTTTAATT AACCTTTTGG TTGTTTGTNC AATATTATAT ATNNNAN 177

SEQ ID NO:3281

SEQUENCE LENGTH:232

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03853

SEQUENCE DESCRIPTION:

GATCAGGACT ATAATATTGT ACAGTTATTA TAGGGCTTTT GGGGAAGGGG AGGATAGCGA 60  
 GAAGATGCTC TGGGGGTTTT GTTTTGTCTT TTCCTTCAGG GTTTTATTTT TGA CTGTTTT 120  
 GTTTTCTNGT NGGCCATTTC TGTATTGCTG GCATCTGTGC TAAGCTTTAC AGTGGCAAAA 180  
 ATAATGACAT GTAGCAAAGA TTTTCAAACA AAATATTTTT NCCTTTTGTA AA 232

SEQ ID NO:3282

SEQUENCE LENGTH:158

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03854

SEQUENCE DESCRIPTION:

GATCGATGGT GCGGCTTTCT CCTGTGCCCA CCCGTCTTCA ATCTCTGTTT TGCTCCCGA 60  
 TGCCTTCTAG ATTCAGTGTC TTTTGATTCT TGATTTTCAA GCTTTCAAAT CCTCCCTACT 120  
 TC CAAGAAAA ATAATTA AAAA AACTTC ATTCTAAA 158

SEQ ID NO:3283

SEQUENCE LENGTH:158

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03855

SEQUENCE DESCRIPTION:

GATCTCATCA CAAGATGACC AAAAGAGTTT GAACTGTGTG TGCTATTTAG AAGATTTAAC 60  
 TTTNATGTAT CTATAGATAC CACAGCTGTT GCTTCTAATA AATTACCTA CCTTTNAACT 120  
 GAAAGTTTAA TAAAGCCAAA TCAATTGAA ATACCAAA 158

SEQ ID NO:3284

SEQUENCE LENGTH:390

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03856

SEQUENCE DESCRIPTION:

GATCTGCCTC ACGTGCAC TG GTGGCCGT GTGCTACGGC TCCTTCTACA ATCTCCTCAC 60  
 CCGAACCTTC CACATCGAGG AGCCCCGCAC AGGTGGCCTG GCCAAGCGGC TGGCCAACCT 120  
 TATCCGGCGC GCCCGAGGTG TCCCCCACT CTNATTCTNG CCCTTCCAG CAGCTGCAGC 180  
 TGCCGTTTCT NTCTGGGGAG GGGAGCCCAA GGGCTGTTT TGC CACTTGC TCTCCTCAGA 240  
 GTTGGCTTTT GAACCAAAGT GCCCTGGACC AGGTCAGGGC CTACAGCTGT GTTGTCCAGT 300  
 ACAGGAGCCA CGAGCCAAAT GTGGCATTG AATTGAATT AACTTTAGAA ATTCATTGTC 360

TCAACTTGTT AGTGGCCACC TCTTATATTN

390

SEQ ID NO:3285

SEQUENCE LENGTH:156

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03857

SEQUENCE DESCRIPTION:

GATCTCAACA CCTATGCCTC CACGTAAATT ATTTTTTCA GCCTTATTC CCTCAAAATT 60  
 GTAGAGTCCT AATCTTCTC TATCTTGTG TGTGAGACCT TGGATAAGTC TCCCTTCCAC 120  
 CTTTCTCTAT TACTTAAAT GGTGAATTG CATAAA 156

SEQ ID NO:3286

SEQUENCE LENGTH:155

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03859

SEQUENCE DESCRIPTION:

GATCAGGTGA TTTGTAAAT TGTATTATC TGTACATGTA TGGGCTTTTA ATTCCCACCA 60  
 AGAAAGAGAG AAATNATCTT TTAGTTAAA ACCAAATTC ACTGTTCAA NTATCTTCCA 120  
 ACTTATTAT TGGGTTGTCA CTCAATTGCC CTGTN 155

SEQ ID NO:3287

SEQUENCE LENGTH:137

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03860

SEQUENCE DESCRIPTION:

GATCTTGCAA CTCCATTTCG GAAGACACCG AGGAAGAGGA GGAAGATGAA GACCAGGACT 60  
 ACAGCTTCC TATATCTCCT ATTCTAGAGT GGTAACTCT CTNTAAGTNT TCAGTGTGTA 120  
 CATAGCCTTT GTGCAA 137

SEQ ID NO:3288

SEQUENCE LENGTH:152

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03861

SEQUENCE DESCRIPTION:

GATCAGTGGG CACAGTTCTT CAGCTACATT GAGACCCTGA AATAACAAT NATATTCTNA 60  
 CTCGACATCT TGTCCCAAT CCTTCAAAA ATATTGATGG TGATTGTGC TACCATTAC 120  
 TCGTTTATTT AATAAGACA TTCAATCCCA AA 152

SEQ ID NO:3289

SEQUENCE LENGTH:152

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03862

SEQUENCE DESCRIPTION:

5 GATCAGNATT GTACGTATTG AAGGTGTAAA ATNTGATAAT TTGTCGTACA CGTACATTGT 60  
 GCAATAACAG TCACAATNAA TTCCTCAGCG CACCCATCAC CACGAATACG ATACATTAGA 120  
 TATTCTGAAC TTGCTCATCT TAGGACTTCA AA 152

10 SEQ ID NO:3290

SEQUENCE LENGTH:153

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03863

15 SEQUENCE DESCRIPTION:

GATCATAATA GTGACCAAAA TATACATGCA GACTTGTTTT TTATTATTGT TGTTTAAGCA 60  
 TAATTTAAGA AAAAAAATTT TTACCTGGTG AACTTGCTAT CTGCTCTGTT TCTAGTTAAA 120  
 ANATAATANA TTTTATCTNC CCTGTGCTGT AAA 153

20 SEQ ID NO:3291

SEQUENCE LENGTH:144

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

25 CLONE:HUMGS03864

SEQUENCE DESCRIPTION:

30 GATCTTCTTT CTTTTTACAG GAACAATTGG CTTCTTTGCA TGCTTTTGGT TTGTNACCAA 60  
 AATATACAGT GTGGTGAAGG TTGACTGAAG AAGTCCAGTG TGTCCAGTTA AAACAGAAAT 120  
 AAATTAAACT CTTATCAAC AAAA 144

SEQ ID NO:3292

SEQUENCE LENGTH:163

35 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03865

SEQUENCE DESCRIPTION:

40 GATCATGGTG AACTTACCAA AGCAAACAAT GCCTGTAAGA TGGTCCTGCA GCAGCCAACC 60  
 AGTGAACTCT TTTGGTGACA TCCTGTTCTT GTTGATAAC TTTATATTCC TATAAATCCA 120  
 TTAAGGCCCC AATAAAGTTT GTCTCTAAGC GCTGTGTTAG AAA 163

SEQ ID NO:3293

45 SEQUENCE LENGTH:149

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03866

SEQUENCE DESCRIPTION:

50 GATCCAAAAT TAGAGCTCAT CAGANTTGTC ATTGAAAGTG TTAACAAAAG TAATATCAAA 60  
 TGACATTGA AAAATATCCT TGTAATAATG CTATATTAAT AGGTATAAGG NTTTTCTTA 120

55

TTAATCTAAT AAAATNCCTT AATAGGAAA

149

SEQ ID NO:3294

SEQUENCE LENGTH:157

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03867

SEQUENCE DESCRIPTION:

GATCAGGACA CTTAGCAAAT GTAAAAATAA AATCTAACTC TCATTGACA AGCAGAGAAA 60  
 GAAAAGTTAA ATACCAGATA AGCTTTTGAT TTTGTATTG TTTGCATCCC CTGCCCCTCA 120  
 ATAANTAAAG TTCTTTTTTA GTTCCAAATT TNAGAAA 157

SEQ ID NO:3295

SEQUENCE LENGTH:148

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03868

SEQUENCE DESCRIPTION:

GATCCGNTAG GAGTAGTAAA TGNGAGACAC AATNGCTTGA TTATACCTCN TATNTGGTTT 60  
 AGCTTCAGTA TTTAAACAAG GAAATAAACT TGAAAATTAT TTGTCATCAT AAAAATGAAA 120  
 CAAANTAAAA TATTATTGC CAGGNAAA 148

SEQ ID NO:3296

SEQUENCE LENGTH:332

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03869

SEQUENCE DESCRIPTION:

GATCTCAGAG GCTCAGAGAC TGCAAGCTGC TTGCCCAAGT CACACAGCTA GTGAAGNNCA 60  
 GAGCAGTTTC ATCTGGTTGT NACTCTAAGC TCAGTGCTCT CTCCACTACC CCACACCAGC 120  
 CTTGGTGCCA CCAAAGTGC TCCCCAAAAG GAAGGAGAAT GGGATTTTNN TTTTGAGGCA 180  
 TGCACATCTG GAATTAAGGT CAAACTAATT CTCACATCCC TCTAAAAGTA AACCTACTGG 240  
 TTAGGAGCAG CAGTGTTCCTC ACAGTGTGGG GTCAGCCGTC CTNCTTNATN NNNGGCCAAT 300  
 GGNATTGAC ACGTGTNCNN NGTTTGGGCA GN 332

SEQ ID NO:3297

SEQUENCE LENGTH:147

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03870

SEQUENCE DESCRIPTION:

GATCTNCTGT CCTCCTTCA CTACATACCA ACAACCCTCT GGCATTAAAC TTCCAGTGAT 60  
 AGTGCTATNA ACTTTGTGTC CTCAGGTCAA CAAGGGACCT CAGTAATNG TTCTNTACAT 120  
 AAGTATATAT ATGGGTATTA NTNNGTN 147

SEQ ID NO:3298

SEQUENCE LENGTH:355

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03871

SEQUENCE DESCRIPTION:

GATCGCCCTC TACATGGCTT CGCAGCCCAA AAACAAATNA GTTAGGCTGC AGAGGACTGG 60  
 TTTGTTTTTT GGCATAAACC CTTTGAAGTT CCTTTTTCAT TGTAAATTA AAATTTTTTT 120  
 NTTNACTTGG ATGGCTTAAC ATTTTNCNA GAAAANTNGG AAGNTATGAA GATGNTGTTT 180  
 TGGTTTGGTT ATGAAANGCA TATGGCTTGN CAGAGCTCAT TCGACAGTTA AGGCCATTGT 240  
 TTAAGAANC GGTGCTTTGC TCTGTGTTT TNCTCCTGAT TTCCCTGGAG GTTCTGGATG 300  
 AGGGCTGANC ACAGGCTTNG TTANTGTNCA GTCTGTGCTG GGGGNCCTCA GGGGN 355

SEQ ID NO:3299

SEQUENCE LENGTH:147

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03872

SEQUENCE DESCRIPTION:

GATCACCAGG GTCAGTTTNT TTAATAATGG TTTCCAACTG GCCTAATACA TTAAGTAAGA 60  
 NTGGNTGATA ACATGACCAG ACAGACATAA AGACCCTGTT GGGAAATNACA TTGAAGTCTC 120  
 AAAGTCAAGA TTTNTTACAC AANTNTN 147

SEQ ID NO:3300

SEQUENCE LENGTH:147

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03873

SEQUENCE DESCRIPTION:

GATCCGCTAC TAAAAGTAAA AATAACCGGT TTGTAAAACA TTAAGAGAAA AANTAGGATA 60  
 TTTAATACAT GTGGTGAGTG GAGANCAGGG TAACTTTAAN TNAAGTTTA AGGCAAATTG 120  
 TAAGCNCCAC AAGANATATC ANATTTN 147

SEQ ID NO:3301

SEQUENCE LENGTH:147

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03874

SEQUENCE DESCRIPTION:

GATCTAAAAA AATTAAAAAG AAATATGAAT GAAAGNAAAA AAAATGCNAA AATNAGCAGT 60  
 TTCCTGGAGG AGCAGTTCCA GCAGGGCAAG CTTNTTGCTT GCNTCGTTTC AAGGCCGGGA 120  
 CANTTTGGCC GAGCAGATGG CTATNTN 147

SEQ ID NO:3302

SEQUENCE LENGTH:147



SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03875

SEQUENCE DESCRIPTION:

GATCATNTTA TTTTACAATC ATTTATAATG AATNAATGTT NCAGTTAGCT TAAAAAGGTA 60  
TACGGTGCTA ATNAGTAAAA TATTGAAGGC AATATTTTAC TGCTAGCTTG CAAAGTTATG 120  
AGAGTTTAAA AAATAAAATA TATGAAA 147

SEQ ID NO:3303

SEQUENCE LENGTH:147

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03876

SEQUENCE DESCRIPTION:

GATCTAGGGT CCTGGGTNTC TTGCATTTAT ATGTCAGAAA AGGGGCGATA TGCTGCTGAG 60  
GGGTGAGTGC ATATAANTNT GGCCCTGAGG ACCAGGGCTG GCAGATNTTG TCTACCTGCT 120  
GAAGAATAAA ANATTCTTT TGGTAAA 147

SEQ ID NO:3304

SEQUENCE LENGTH:150

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03877

SEQUENCE DESCRIPTION:

GATCTNACCC CCAGCATGAT TGTATTCTT TCCCCTCCAG TCAAACCGTA ATACAGTTTC 60  
CAGAAAAATC GACAGTCTGC AATGCCAAAA GGGTAAAAAT CTGTATTCA CAGTTGTATA 120  
GAATAAAGGC TTAGTTAAA ATATTTCAAA 150

SEQ ID NO:3305

SEQUENCE LENGTH:146

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03878

SEQUENCE DESCRIPTION:

GATCTAAAAA TAACTGTAAT TATTTAAATG ACTAANAGGA AAGTACATT TTTAAATNC 60  
TGAAAATTGC CTTNNTGTGT TTATNCAAAAC TGAAAAGCTG AGACCAAGAG CAAGGAAGGT 120  
AAAANGTTAA CAGGCAAACA TTTNCN 146

SEQ ID NO:3306

SEQUENCE LENGTH:143

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03879

SEQUENCE DESCRIPTION:

GATCCTCACC AACCTAAGCA AGAGGAAGTG CCCCTCTCAA CCTGTGCGGG NTGCTGCGTC 60

CCAGGACTGA GACGCAGGCC AGCCCCGGCC CCTAGCCCTC AGGCCTTCTT TTTATCCAA 120  
ATAAATATTT CTTAATAAGG AAA 143

5 SEQ ID NO:3307  
SEQUENCE LENGTH:143  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
10 CLONE:HUMGS03880  
SEQUENCE DESCRIPTION:  
GATCAACAAG AGCACTGTAC TCCTGGCAAT NATTACATAT GTNAGAACAT GGATTTTGCA 60  
CTGTAGACAA CATTAAACAC CAGTCTATGG GGTACTGCAT TGCTTTTNAT AAAGTTCAAA 120  
ATAAAGATTT ATTTTCAAAC AAA 143

15 SEQ ID NO:3308  
SEQUENCE LENGTH:142  
SEQUENCE TYPE:nucleic acid  
20 TOPOLOGY:linear  
CLONE:HUMGS03881  
SEQUENCE DESCRIPTION:  
GATCCCTTTA CTGGAGCCCA GTATGTGCTG TGTGAGTTAG AAGTCATTCT TGCTGAGAAG 60  
GTGAATAGGT AGGGATTTCG CTGTTTTGT AAGTCTACAA TTTGCCAAGA GTAAATAACA 120  
25 CTGGACCAGC TGAAAAAGTA AA 142

30 SEQ ID NO:3309  
SEQUENCE LENGTH:142  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03882  
SEQUENCE DESCRIPTION:  
35 GATCTGCACA TTTAATCGTG GCTGTTTCTG TATAGCCTAT ACTGCATTAG CCNAAGANAT 60  
TGTTGCTTTG TAACTTTTTG CACTATTGTT TTGGCTGGAT TTGTATTACA CACAGTTTAA 120  
AAAAAAACAA TTCCACACTA AA 142

40 SEQ ID NO:3310  
SEQUENCE LENGTH:141  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03883  
45 SEQUENCE DESCRIPTION:  
GATCCCTAAG CCCCCAGCT GTAAATAGGC TGTGGCCAGT GCCTGGTCAT NAGAAGAGNG 60  
AGGAGGAGCC CAGGCGTCTG TTTATGTATT TATTTATTTA TTTATTATAC CTATTAATAA 120  
AAAAGGTGCT CAGCCTCCAA A 141

50 SEQ ID NO:3311  
SEQUENCE LENGTH:139

55

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03884

SEQUENCE DESCRIPTION:

GATCTTGGCC TTCGCAGTGC CCACTGATGG CATTACTCTG CACTATAGCC ATTTNCCCCA 60  
 ACTTAAGTTT AGAAATNACA AGTTTCAGTA ATAGCTGAAC CTGTTCAAAA TGTTAATAAA 120  
 GGTTTCGTTG CATGGTAAA 139

SEQ ID NO:3312

SEQUENCE LENGTH:138

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03885

SEQUENCE DESCRIPTION:

GATCTGGAAG ACAAGTAACA TCTCCTTTT NTTGGTGCTC GCCTGCCGTG CTCTAGGTGC 60  
 TTTTAGAGAT GCTGGTCTGT GTGCTAGGGA AGCGATGAAC CATACTGTTA GTCTATTAAA 120  
 CATAACTCAA CCTGGAAA 138

SEQ ID NO:3313

SEQUENCE LENGTH:138

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03886

SEQUENCE DESCRIPTION:

GATCTATCTC TGTGTCCAAG TCTCCTTTT TTATAAGGAA ACCAGTCATA ATGGACCCAC 60  
 CTGAATNACC TCATTTTAAC TTGATTACCT CTGTAAAAA TGTATTCCA AATAAAGTGA 120  
 CCTTATGAGG TATTGAAA 138

SEQ ID NO:3314

SEQUENCE LENGTH:136

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03887

SEQUENCE DESCRIPTION:

GATCAACAAA TCTCCTAGGC CTNTNACCAC ATACATTAC ACCNACTACC NCAACTATCC 60  
 ATAAATCTAA GTATAGCCAT TCCACTATNA GCTGGAGCCG TAATTACAGG CTTCCGACAC 120  
 AAACTAAAAA GCTAAA 136

SEQ ID NO:3315

SEQUENCE LENGTH:139

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03888

SEQUENCE DESCRIPTION:

GATCCCACCT TCAACACCTT ACAAGTAAAG CCAATGAAGN ACAGTTGAAA CATGCAAAAT 60

ATGGNGCTTT TCAITGAATT ACTCTTTTAC TGTTTACCAT TCACTATAAT TCACAATTAA 120  
AATTGTGTGN CTANACAAA 139

5

SEQ ID NO:3316  
SEQUENCE LENGTH:133  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear

10

CLONE:HUMGS03889  
SEQUENCE DESCRIPTION:  
GATCTGTGTA GTTAATGTAT TTATTAATGC TTGACTTTTA AAATCCTGGG CATAAATAGT 60  
GCAGAGCCTC GTATGTTTGT CAGTTCATGC CGAGATGAAA TAAATCACGC AGAAAGTGCC 120  
AGTCCTCCTG AAA 133

15

SEQ ID NO:3317  
SEQUENCE LENGTH:132  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03890

20

SEQUENCE DESCRIPTION:  
GATCTGTGGA GTGTGTGTTT CAAAGAGAGA ACTACAGAAA TTTTAAAGCA GGAAAACCTG 60  
AATGTNATGT GCACATTTTC ATCCCATG GACAATGTAT GTGTTTTAAT AAATGGAATT 120  
TTCAGATTCA AA 132

25

SEQ ID NO:3318  
SEQUENCE LENGTH:132  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03891

30

SEQUENCE DESCRIPTION:  
GATCAAATGT GGGCCCGTTT TTGGCCGCCG CCGCCCTGCC CCGTCCCTNC GGCCACCACC 60  
TAATTANTTG CCGTGCTTCC TGCTGCTGTA ACTGCTTTNT TACCTTTCCA ATAAAGANTT 120  
TCTTGTTTA AA 132

35

SEQ ID NO:3319  
SEQUENCE LENGTH:132  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS03892

40

SEQUENCE DESCRIPTION:  
GATCATTATT ATTGTAATAG TCTCATGTTT AAATGGGATT ATATAATGAN AACAGTTTAA 60  
AGAAAAATNAT AATCTTATAT NTCAAATGTG GATGCATATA ACCTGTNAGT GAAAAANCAC 120  
TGANTGATTT AN 132

45

SEQ ID NO:3320  
SEQUENCE LENGTH:131

50

55

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03893

SEQUENCE DESCRIPTION:

GATCATATTG CTGTAAGTTC TTTTAAGTAG TTGATGTGGA AAACATTTTA AAGTGAATTT 60  
 NTCAAAATNC TGGTTTTGTG TTTTATCCAA CTTTGTGCA TATATATAAA GTATGTCATG 120  
 GCATGGTTAA A 131

SEQ ID NO:3321

SEQUENCE LENGTH:131

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03894

SEQUENCE DESCRIPTION:

GATCCTCAGT GTAGTTCTGA AACTAAGACT ATAGATATTT NNTTCTTTT AATTTCTCTT 60  
 TATACTAAAG AATCCAGAGT TGCTACAATA AAATAAGGGG AATAATAAAC TTGAGAGTGA 120  
 ATAACCATAA A 131

SEQ ID NO:3322

SEQUENCE LENGTH:131

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03895

SEQUENCE DESCRIPTION:

GATCTTAGAG TTTGCACAGC TTAATAAAT GGAAATATTG GAATCTGAAT CCAAAACAGC 60  
 CTGACTCAAA ACAATGTNCT TNCCATTATG CAAGGGAAAA AAAAAANGGT TGGGTNTCAG 120  
 NGNGAGGGTA N 131

SEQ ID NO:3323

SEQUENCE LENGTH:433

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03896

SEQUENCE DESCRIPTION:

GATCATAGTC TTAGGAGTTC ATTTAAACCA TAGGAACTTT TCACTTATCT CATGTTAGCT 60  
 GTACCAGTCA GTGATTAAGT AGAACTACAA GTTGATAGG CTTTATTGTT TATTGCTGGT 120  
 TTATGACCTT AATAAAGTGT AATTNTGTAT TACCAGCAGG GTGTTTTTAA CTGTGACTAT 180  
 TGTATAAAAC CAAATCTTGA TATCCAGAAG CACATGANGT TTGCAACTTT CCACCCTGCC 240  
 CATTTTTGTA AAAGTGCAGT CATCTTGGAC CTTTTAAAC ACAAAATTTA AACTCAACCA 300  
 AGCTGTGATA AGTGGAATGG TTAAGTTTAA TACTGTGGGT ATGTTTTTGN NTTACAGCAG 360  
 GTTAATGCTT TCTTTTCCA GGTGNCCTT TGAGGATTNA GGGAAAATTA NATAACTCTT 420  
 TGTACAGTTC AAA 433

SEQ ID NO:3324

SEQUENCE LENGTH:129

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03897

SEQUENCE DESCRIPTION:

GATCCACCCA CCTCGGCCTC CCAAAGTGCT GGGATTATAG GTGNNAGCCA CCGCGCCGGG 60  
CCGGTTGCTG GCATCTTAAT GTTCTGTAGG TGGAATATTT CCAATAAACA CAAGGTGCCG 120  
TAATTGAAA 129

SEQ ID NO:3325

SEQUENCE LENGTH:129

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03898

SEQUENCE DESCRIPTION:

GATCTGGTAA ACTTNNAATC AATTAAATTA ATGCANCAAT AGATTATNAA TATTAAGTGA 60  
CCATTTAAGT TTTTNAATAA GTTTTTTACA AAGAAAAGTT AACATTAA AAGAATTACA 120  
GCTTTCAAA 129

SEQ ID NO:3326

SEQUENCE LENGTH:128

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03899

SEQUENCE DESCRIPTION:

GATCTGGAAA TTTTTTAATC AGTTAAATTG TGCAGCAATA GATTTTTAAC TTTAAGTGA 60  
CATTTAAGTT TTTNAATAAG TTTTTTACAA AGAAAAGTTA AACATTAAAA AGAATTACAG 120  
CTTTCAAA 128

SEQ ID NO:3327

SEQUENCE LENGTH:127

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03900

SEQUENCE DESCRIPTION:

GATCCTGTAG TGCCTCTATA GAAGTACCCA CAGAAAAGTAA AGTATCACAT TTATAAATAC 60  
CAAAGATGTA ACAATTTTAA AATTTTNTAG ATTACTCCAA TAAAGTGTTT TAAGTTTTC 120  
TATGAAA 127

SEQ ID NO:3328

SEQUENCE LENGTH:131

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03901

SEQUENCE DESCRIPTION:

GATCCATCGC GATACTATGT GTGCATTATT TGAAAGTTAT TGGAAATTTT ATTCAAACCG 60

TGGAACAAAT GTATGTNATT TTTTATACT TCTTAATTTA AATAAAATAT TTAATGCACT 120  
 ATTAATAA A 131

5

SEQ ID NO:3329

SEQUENCE LENGTH:123

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

10

CLONE:HUMGS03902

SEQUENCE DESCRIPTION:

GATCAGCCCT TTGTACAGAA AAATGTGTCT ATAAAAATTA TGTGTTATTT AATTCTGATA 60

CTTTTGGCT TGTAATAGC TTCTGAACT TTTACAATA AAAATGTTT AGAAACTGTT 120

AAA 123

15

SEQ ID NO:3330

SEQUENCE LENGTH:123

SEQUENCE TYPE:nucleic acid

20

TOPOLOGY:linear

CLONE:HUMGS03903

SEQUENCE DESCRIPTION:

GATCATGACC GGAACATGGN CTGGGTTTCC ACCCAGCTCC AGGCCACATG CAATGTCCAC 60

AAGTNTGCCT TCAATNACTG GTTCAGTGA CACCTCACT TCCAGATTGA GCACCATCTN 120

NNN 123

25

SEQ ID NO:3331

SEQUENCE LENGTH:205

SEQUENCE TYPE:nucleic acid

30

TOPOLOGY:linear

CLONE:HUMGS03904

SEQUENCE DESCRIPTION:

GATCGATTCA ATGCCCGATG CTTCTGTTTC ATTCCCGACC CTTTCTACTA TGCATTTCCT 60

TTTATCAGG TGTATAAAGT TAAATACTGT GTATTATCA CTAAAAAGTA CATGAACTTA 120

AGNGNAACT AAGCCTTTCG TGTTTTTCCA NAGGNCNGCN NGGCTTCTNT GTACAGTTGG 180

AATAAACAGA CAGCAAAATG GTAAA 205

35

40

SEQ ID NO:3332

SEQUENCE LENGTH:122

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

45

CLONE:HUMGS03905

SEQUENCE DESCRIPTION:

GATCCTCAGG CGGCCCCAC CAGGGCACAC CCTACTGTCC TTGTGCCTCA CGCCCCCTCC 60

TCATCCTGCA CCCCTTCCAT CCCACCTTCC CTTTCAATAA ACAGCTGGGA TGGATACTGA 120

AA 122

50

SEQ ID NO:3333

55

SEQUENCE LENGTH:120

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03906

SEQUENCE DESCRIPTION:

GATCTGATTT TTTCCCCCTT TACCTAGCTG TGCCCCCTCT GGTATNTAT TTCCTTAGTG 60  
CCAGGAGGGC ACAGCAGGGG AGCCCTGATT TTAATAAAT CCGGAATTGT ATTTATTAAA 120

SEQ ID NO:3334

SEQUENCE LENGTH:119

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03907

SEQUENCE DESCRIPTION:

GATCACCAGT GCATCCTTCA TCACAGCATG TGCAATATGC CAAGATTACC CTCGGTCATT 60  
CCTGTCAACA AGGGGTCAAT GTCATAAATG TCACAATAAA ACAATCTCTT CTTTTTAAA 119

SEQ ID NO:3335

SEQUENCE LENGTH:119

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03908

SEQUENCE DESCRIPTION:

GATCCATGAG GAAAAGATGC TCTCCACCT AAGGCCAGGA ATCTGAGAGC AGGACTGGCT 60  
GAGCTCCCAG GGCAAGGGGT TACTAATGC TTATCAATAA AGAATATTGA GCCTGGAAA 119

SEQ ID NO:3336

SEQUENCE LENGTH:273

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03909

SEQUENCE DESCRIPTION:

GATCAGATTG CATGTNACTC TNAAGCTGAC GAACTTCCAT GGCCCTCATT AATGACACTT 60  
GTCCCCAAAT CCGAACCTCC TCTGTNAAGC ATTCGAGACA GAACCTTGT ATTCTCAGA 120  
CTTTGGAAAA TGCATTGTAT CGATGTTATG TAAAAGGCCA AACCTCTGT CAGTGNNNT 180  
AGTTACTCCA GTGCCAACAA TCCTAGTGCT TTCCTTTTN AAAATGCAA ATCCTATGTG 240  
NTTTAACTC TGCTNCACC TGATTCAACT AAA 273

SEQ ID NO:3337

SEQUENCE LENGTH:119

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03910

SEQUENCE DESCRIPTION:

GATCACCATG AACAAAGNTA TATTCCTAT TTATTTATTA TATGTGCACT TCAAGAAGTC 60



ACTGTCAGAG AAATAAAGNN TTGTCTAAAT GTCATGTTGG AGATNCCTTT GCATNCTN 119

SEQ ID NO:3338

SEQUENCE LENGTH:118

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03911

SEQUENCE DESCRIPTION:

GATCAGGACT TCAAGGGCCA GACCACAGAC TACTTATAGG AGCATCTTCA AGGCGGTAC 60

AGTGAAAACC TTGAAATGGC CTTTTTNAAT ATATATAANT AANTGTNAAT ATTATTNN 118

SEQ ID NO:3339

SEQUENCE LENGTH:118

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03912

SEQUENCE DESCRIPTION:

GATCCAAATN ATGGCCACAG ATGAACTTCC ATGCAAGCNA TGGCTGAGTT TCATTGCTTA 60

AAATNCTCCT CTGTTTAGAG GGGCCTGGTA GAAATAAAAA CCCACCCTAT ATCTTAAA 118

SEQ ID NO:3340

SEQUENCE LENGTH:118

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03913

SEQUENCE DESCRIPTION:

GATCCTCCTG GCCGCCCCGC AGGTCTNTGG AAGGGCTGGA CGGCAAGTCC GTNTAGCTCA 60

CGGCCCCCTC CAGTGGAATG GNTCTTCCG GTGGAGATAA AAGTTGATTT NCTCTAAA 118

SEQ ID NO:3341

SEQUENCE LENGTH:351

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03914

SEQUENCE DESCRIPTION:

GATCCCAGGT GCGTGTNTCT CTGTCTCTCC TAGCCCCTCT CTCACACATC ACATTCCCAT 60

GGTGGCCTCA AGAAAGGCC GGAAGCGCCA GGCTGGAGAT ANCAGNCTCT TNCCCGTCGG 120

CCCTGCGTCG GCCCTGGGGT ACCATGTGGC CACAACCTGCT GTGGCCCCCT GTCCNNAAGA 180

CACITCCCCT TGTNTCCCTG GTTGCCTCTC TTGCCCTTG TCCTGAAGCC CAGCGACACA 240

GAAGGGNGNG GGGCGGTCT ATGGGGGAGA ANGGGAGCGA GNTCAAGAGG TGGGCATGGG 300

TTTGNAAGG GTNGGCGTTT GGGGGGCCTN TNATGNTGGC TTTTCAANC N 351

SEQ ID NO:3342

SEQUENCE LENGTH:117

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03915

SEQUENCE DESCRIPTION:

5 GATCATGCCG CTGCACTCCA ACCTGGGCAG CAGTGCAAGA CTCTGTCTCA AAAGGGGAAA 60  
AAAAAAAANT TNCTGATGTG NCCCATGAAG GGACCTCATT TNCCTCGNAA TTTTGGN 117

SEQ ID NO:3343

10 SEQUENCE LENGTH:116

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03916

SEQUENCE DESCRIPTION:

15 GATCGGCCGT ACCAGCCGCC CCGCCGCCG GTGGGCGCTC TCGGACTACT CGCTGTACTT 60  
GCCGCTCTGA GTCAGTGGCC CTTTCGTTCC TTGTAAATAA ATCCCGCCCC CGGAAA 116

SEQ ID NO:3344

20 SEQUENCE LENGTH:116

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03917

SEQUENCE DESCRIPTION:

25 GATCCAGACA AGTGGGAGAG CCCGTGGGGG CAGGGGACCT GGAGCTGCCA GCACCAAGCG 60  
TGATTCTGCG TGCCTGTATT CTCTATTCCA ATAAAGCAGA GTTTGACACC GTCAAA 116

SEQ ID NO:3345

30 SEQUENCE LENGTH:116

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03918

SEQUENCE DESCRIPTION:

35 GATCTCATAA GAAATGTAAT ATGTAAATAA TATCTTGCTT TATGTTGTAA AATATACATT 60  
GTTTGCNCTA GAATAGAAAT AATTTCTTTT CAATAAAAAG AAAGAAGGAC TCTAAA 116

SEQ ID NO:3346

40 SEQUENCE LENGTH:116

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03919

SEQUENCE DESCRIPTION:

45 GATCGTTGTG TTGTTATTTT ACTGCACTTT TTACTTTTTT NCGTGTGGAG CTGTATTCCC 60  
GAGACCAACG AAGCGTTGGG ATACTTCATT AAATGTAGCG ACTGTCAACA GCGAAA 116

SEQ ID NO:3347

50 SEQUENCE LENGTH:116

SEQUENCE TYPE:nucleic acid

55

TOPOLOGY:linear

CLONE:HUMGS03920

SEQUENCE DESCRIPTION:

5 GATCAAGGCC AAATAACCCG ATTTGGTTTG GGCACCTCAAG CAATAGTAAA GCCTGTAAGA 60  
CATGATAGGA TTATNTTCCC CTTTGGATTT AAATNTAATA TAGCAGTTGG ATTAAA 116

SEQ ID NO:3348

10 SEQUENCE LENGTH:115

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03921

SEQUENCE DESCRIPTION:

15 GATCCTGTAG ACCCTTTCCT TTGCCCAATT TCCCCCTTTT TGGGATGGAA ACATTACCC 60  
AATCCCTATA CCCCATTGT ATCTTGAAG TAAATAATTT GTTTTGTATT TTAAT 115

SEQ ID NO:3349

20 SEQUENCE LENGTH:115

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03922

SEQUENCE DESCRIPTION:

25 GATCTCTTCA CTGTNAAAAG TTGCCCGGGT GCAGCGCCTT TCCCTTCTAN CATGGGAAAT 60  
GCAGGCTGGG CCCTTGGGNT NAGCCTGCGG GGCTCTGGTG CTGTCCCCGA CCCNN 115

SEQ ID NO:3350

30 SEQUENCE LENGTH:113

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03923

SEQUENCE DESCRIPTION:

35 GATCCACTGT TTGCAGCAGA ATTATATATA TGTATAGGAA AAATCCACTT TGAATAATCC 60  
ATGTTTTGTA TTTGGAAATT GTTTTAAAA ATAAAAAGGA AAGGAAATAT AAA 113

SEQ ID NO:3351

40 SEQUENCE LENGTH:113

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03924

SEQUENCE DESCRIPTION:

45 GATCTAGGCA GTGGGTTAAG CCAGACCCCT AAAAGTGACC CTTTCCTCTT CTGCCCTATT 60  
CTNCTNAGAC CCTCAGAAAG NNNTCCAATT TTTTAAATC CCTGTAGCTC CAN 113

SEQ ID NO:3352

50 SEQUENCE LENGTH:117

SEQUENCE TYPE:nucleic acid

55

TOPOLOGY:linear  
 CLONE:HUMGS03925  
 SEQUENCE DESCRIPTION:  
 5 GATCTGATGA ATTGGTTTT GAATCCCAGA AANGGTCTGC CATGGAGTTG GCAGTCATCA 60  
 CGGTAGATGG CGTATGATTT TCCTGAATTT TAAATAAAAT GAAAACCATA AATTAAA 117

SEQ ID NO:3353  
 10 SEQUENCE LENGTH:112  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS03926  
 SEQUENCE DESCRIPTION:  
 15 GATCAGAGCT GTTAGGTAAA GGCCTAACCA CCTCCCTGCA GNCTCTTAAN TCTCAAGCTT 60  
 TAGGAACCCA TTTCTAAANG TACACTAGCG GAGANTTTAT ATTGTCAGCC NN 112

SEQ ID NO:3354  
 20 SEQUENCE LENGTH:111  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS03927  
 SEQUENCE DESCRIPTION:  
 25 GATCACGGTA CGTCCATAAA GCCAGTATTA CACTTAAATN MAGTATTCTT TTTTGTAATC 60  
 GTTTTTTTTA GAAGGTAAAC AAATTTAATA AAGCTACCAA TAATGTTGAA A 111

SEQ ID NO:3355  
 30 SEQUENCE LENGTH:111  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS03928  
 SEQUENCE DESCRIPTION:  
 35 GATCTAGAAA NTGCCCTCCT TATACCCCTA CCATGAGCCC TACAAACAAA AAACCTGCCA 60  
 CTAATAGTAT GGTATCCCT CTNANTAAAN CATCATCCTG GCCCTAAGGN N 111

SEQ ID NO:3356  
 40 SEQUENCE LENGTH:111  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS03929  
 SEQUENCE DESCRIPTION:  
 45 GATCTTTGCA ATTNAAAGNT TAGCCACGTG GCTTGCTTCA GCNAGTAATG TGAATGGAAA 60  
 TAACGTGTAT CANTGCTGGA TAGAAAACCT AANAGCCAAC ACATGGTTCC N 111

SEQ ID NO:3357  
 50 SEQUENCE LENGTH:110  
 SEQUENCE TYPE:nucleic acid

55

TOPOLOGY:linear

CLONE:HUMGS03930

SEQUENCE DESCRIPTION:

5 GATCCCGTAG AATATATATT TAATAATCCC ACAAACGGAG GCCAGACTTC TCGTTAACT 60  
TCAGTAACAC AAGCTTCTTT AAGCCAAATA CATCACTTGC CACTACCAA 110

SEQ ID NO:3358

10 SEQUENCE LENGTH:110

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03931

SEQUENCE DESCRIPTION:

15 GATCTCCGTG GTGGTCGTGG GCCGCCAGGT GAATNANCCC CACATCCGCN TCCTGGTCAC 60  
CGGCAAGACG GCCGAGTACG ACGTGGCCTA CGGCGAGAGC ACCTNTNCCN 110

SEQ ID NO:3359

20 SEQUENCE LENGTH:115

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03932

SEQUENCE DESCRIPTION:

25 GATCCTTCGA AGCACTCAGT TCACTCTTCC CCACCACAGT GGTAAAAGG CGTTGTATC 60  
TGCCACTATG TGTGTGTTTT AAAATAANCT TTTGGAAACA TGTTGGNGN GNAAA 115

SEQ ID NO:3360

30 SEQUENCE LENGTH:214

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03933

SEQUENCE DESCRIPTION:

35 GATCCACTAA TGTAGCTTAA GGTTATTAGN TTTGGGCTTT TAATCATGGN ATAATCTTAT 60  
GTATTGGTGT AAGAGTTGAT GAATGACTTT AGCTGTGTGA ATATATAATA GTCAAACTGC 120  
AAACATTTTG CATCCCTTTT GTGACCTAAT TTACAGNCAT TTAAATTGTG TTGCAGTTCT 180  
40 GCTTTGCCGT TTAATAAAAA GCTATTTTCA NAAA 214

SEQ ID NO:3361

SEQUENCE LENGTH:110

SEQUENCE TYPE:nucleic acid

45 TOPOLOGY:linear

CLONE:HUMGS03934

SEQUENCE DESCRIPTION:

GATCANAGAT TTCAATNACA GTGCAGGAAA GCAGCACTGA GAAACTTTTA ATTGTNTTNA 60  
50 ATTCTNCTT TAATGTTTAC ACCACCACAT TCCATTTCAC TTTAATTTN 110

SEQ ID NO:3362

55

SEQUENCE LENGTH:108

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03935

SEQUENCE DESCRIPTION:

GATCTTCCCC TGACCTGCTC CCAGGGCTAT AACAGATACG GACTTTGAAA CTGTATGGAG 60  
TATAGAGCAG TGCTCTATAA TTAAATAT ACATATATTG CAACCAAA 108

SEQ ID NO:3363

SEQUENCE LENGTH:363

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03936

SEQUENCE DESCRIPTION:

GATCTTCAGC TTGGTAGATT TAATTGCCCA GTGAATGGCA CTTACGTTT CATTITNNAC 60  
ATGCTAAAGC TGGCAGTGAA TGTNCCACTG TATGTCAACC TCATGAAGAA TGAAGAGGTC 120  
TTGGTATCAG CCTATGCCAA TNATGGTGCT CCAGACCATG AAAGTCTAG CAATCATGCA 180  
ATTCTTCAGC TCTTCCAGGG AGGCCAGATA TGGTTACGNC TGCACAGGGG AGCAATTTNT 240  
GGAAGTAGCT GGGAAATATT CTACGGTTTC AGGCTATCTN CTTTATCAA GGTTTGAATG 300  
TCAGTNCAGT NTTTGACNAC TAAAAGGNNT NGGGGTNCTA ATTANGTNGG GTTTGAAGGG 360  
TAN 363

SEQ ID NO:3364

SEQUENCE LENGTH:106

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03937

SEQUENCE DESCRIPTION:

GATCTGGGGA GTNTNAGGAG AGGGTGGCAT CAGNAGCTGC TCAGGCTTGG CGGAGGGAGC 60  
GGCATGGCCG ATGTCACTCA GCCCCTTCCC GGTCCGCCCN NTTCCN 106

SEQ ID NO:3365

SEQUENCE LENGTH:105

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03938

SEQUENCE DESCRIPTION:

GATCGTTTT TCCAGAGTCG CGGGGACACA GGAGTNTTCC TACAGTACAT NCACGCCCGC 60  
NTCCACAGT TGAAGAGAC TTTTGGATGT GGTACNTGA NTGAN 105

SEQ ID NO:3366

SEQUENCE LENGTH:105

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03939

## SEQUENCE DESCRIPTION:

GATCATCTAA AAAATGCCAT GANTGGAAAT NCGAAGGCCC AGACACCAAT ATTCNTAGA 60  
AGTAAACAGC TCAAAGACAC TCTCCTATCT NAGGAAATNA ATGTN 105

SEQ ID NO:3367

SEQUENCE LENGTH:104

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03940

## SEQUENCE DESCRIPTION:

GATCCAGTGG GGTCGGACA CTGGGCCCCG CAGCGAAAGC ACGNTCCAGC CACCAGGAGG 60  
CCACCTATTN TTTCAAAATA AAGACTGCGT TCCTCTCTTG GAAA 104

SEQ ID NO:3368

SEQUENCE LENGTH:104

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03941

## SEQUENCE DESCRIPTION:

GATCAAAAAA GAAGAGTTAA AACAACACAT GTAAATNCCT TTAAATATTT NATGGGAATG 60  
CCTCTCATTT AAAAATAGAA ATAAAGCATT TTGTAAAAA GAAA 104

SEQ ID NO:3369

SEQUENCE LENGTH:104

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03942

## SEQUENCE DESCRIPTION:

GATCCTTTAT CTTTCCATAT GGCACACGTA AGAAAGTGTT TTTCTACTAT TAATATTAA 60  
TTAAACCTT TACTTNTGTA TAATAAATNA AAACTCAGAA TAAA 104

SEQ ID NO:3370

SEQUENCE LENGTH:104

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03943

## SEQUENCE DESCRIPTION:

GATCTGGAAG AGGCTTGTA CCTGAACTAN TATGTAGGAA GGCAGTACNA NCAGCCCACC 60  
AGTGTAATCT CCCTGNATTA AGGCATTCTT AAAAAGTTAG GCNN 104

SEQ ID NO:3371

SEQUENCE LENGTH:104

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03944

## SEQUENCE DESCRIPTION:

GATCCGCTCT GGTCAAACCC TTCCAGGCCA GCCAGAGTGG GGATGGTCNN TNACCTGCTG 60  
GGAAGGCANN CTGATGGGGC ACACCCTTGG CCTCTCGTCC ACGN 104

5  
SEQ ID NO:3372

SEQUENCE LENGTH:102

SEQUENCE TYPE:nucleic acid

10  
TOPOLOGY:linear

CLONE:HUMGS03945

## SEQUENCE DESCRIPTION:

GATCAAAATT TTTTGATAAT TTAATAATTG TGTGTGATT TNAATTTNA AGAAATTGCT 60  
GAAACTTAG AAAATATAA TGGTATACAT ACAATAGNNA AA 102

15  
SEQ ID NO:3373

SEQUENCE LENGTH:105

SEQUENCE TYPE:nucleic acid

20  
TOPOLOGY:linear

CLONE:HUMGS03946

## SEQUENCE DESCRIPTION:

GATCAATAAT TTAATGTAA CTAGTTGGGA TTTTATAGTT AAAATNATAT TTGTGTATAT 60  
AACATAACTA ATCTGTAAAT NGTAATAAAT ATATTNCAA TTAAA 105

25  
SEQ ID NO:3374

SEQUENCE LENGTH:99

SEQUENCE TYPE:nucleic acid

30  
TOPOLOGY:linear

CLONE:HUMGS03947

## SEQUENCE DESCRIPTION:

GATCATTAG TACTTTTGTN TTCTCCCATG TGCTTGAAGG AAAATAAAG TGCTACTACC 60  
GTATTTNTTG TTTTCATCAA AAAATAAAAA TAATTAAA 99

35  
SEQ ID NO:3375

SEQUENCE LENGTH:97

SEQUENCE TYPE:nucleic acid

40  
TOPOLOGY:linear

CLONE:HUMGS03948

## SEQUENCE DESCRIPTION:

GATCTTTAGC ACAGTGATAT NACCATGACT TCACAGACAT GGTCTAGAAT CTGTACCCTT 60  
ACCCACATAT GAAGAATAAA ATTGATTAAA GGTAAA 97

45  
SEQ ID NO:3376

SEQUENCE LENGTH:97

SEQUENCE TYPE:nucleic acid

50  
TOPOLOGY:linear

CLONE:HUMGS03949



## SEQUENCE DESCRIPTION:

GATCAATAAT AATNAGGAAA GCATGATATG TATATTGCTG AGTTGAAAGC ACTTATTGGA 60  
 AAANATTAAT AGGCTAACAT TAAAAGACTA AAGGAAA 97

SEQ ID NO:3377

SEQUENCE LENGTH:94

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03951

## SEQUENCE DESCRIPTION:

GATCCCCCTC CTTCCCCCTC TCCCCATTGT ATTTATTGTC CTGCTGGAAA ATNACATCCG 60  
 GAAATAAAAT AGAAATATGT CTTTNNATT TAAA 94

SEQ ID NO:3378

SEQUENCE LENGTH:93

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03952

## SEQUENCE DESCRIPTION:

GATCCTAAAC TTTTGGATA ATCTTTTATA TTTNTAACCT TTGAATTAA TCATTGTNCT 60  
 NAGATTAAAA TAAAAATGC TATTGAACT AAA 93

SEQ ID NO:3379

SEQUENCE LENGTH:91

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03954

## SEQUENCE DESCRIPTION:

GATCTGGAAT TCCCTGCTGT AATCTTTTAA AGGGAATCCA CTGGAATATA TTAGTTTTTG 60  
 TTTTAAATAA AACCATTCTT TACTTAACAA A 91

SEQ ID NO:3380

SEQUENCE LENGTH:91

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03955

## SEQUENCE DESCRIPTION:

GATCTATGGC CTCTGGTGCT TTGCTCTGTA TTGGTTTAA TTTTTTTGTC CTAATCTCTT 60  
 CAATCAATAA AATTGTGCGT ATTAACTAA A 91

SEQ ID NO:3381

SEQUENCE LENGTH:91

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03956

## SEQUENCE DESCRIPTION:

GATCAACTNA ATGTTTAAGA CTTTAGATGT CTTGTATTAA AAATTACACA AAAAAAGTAA 60  
AACTTTTAT ACTTACCCTT TTAACCTCAA A 91

5

SEQ ID NO:3382

SEQUENCE LENGTH:90

SEQUENCE TYPE:nucleic acid

10

TOPOLOGY:linear

CLONE:HUMGS03958

SEQUENCE DESCRIPTION:

GATCTCTGTA ATNTTATNTA GAGTTTGAGC TGAAGCCCCG TATATCTAAT NTATTTTGT 60  
AAACATGAAA GTGCATCCTT TCCCTCCAAN 90

15

SEQ ID NO:3383

SEQUENCE LENGTH:88

SEQUENCE TYPE:nucleic acid

20

TOPOLOGY:linear

CLONE:HUMGS03959

SEQUENCE DESCRIPTION:

GATCATACCT ATTAATAATA TGCCAAACAC CAAATATGAA TTTNATGATG TACACTTGT 60  
GCTTGGCATT AAAAGAAAAA AACACAAA 88

25

SEQ ID NO:3384

SEQUENCE LENGTH:88

SEQUENCE TYPE:nucleic acid

30

TOPOLOGY:linear

CLONE:HUMGS03960

SEQUENCE DESCRIPTION:

GATCAAGAAG ACGNNTAAGG GAAGAACGTA CACAGTGAAA ANCCAAAAAA AGAAAAAAAT 60  
GTTTATACAA CCCTAAGTCA ATAACCTN 88

35

SEQ ID NO:3385

SEQUENCE LENGTH:87

SEQUENCE TYPE:nucleic acid

40

TOPOLOGY:linear

CLONE:HUMGS03961

SEQUENCE DESCRIPTION:

GATCTAGGCA CACCTNGCTC TTNGCTGCAT GTGGTTATNA ACANCTTCCA GTGGAAGTCG 60  
AATAAACAGT TTTTGGTAAA TCTCAAA 87

45

SEQ ID NO:3386

SEQUENCE LENGTH:85

SEQUENCE TYPE:nucleic acid

50

TOPOLOGY:linear

CLONE:HUMGS03962

55

## SEQUENCE DESCRIPTION:

GATCCTGCCC TGAATCTCCA TAGTCTCCAC TGTGAACTGA GGAGGGGAGG GGTGTGCTGG 60  
GGAATAAATC TTGTATGAGA AAAAA 85

SEQ ID NO:3387

SEQUENCE LENGTH:84

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03963

## SEQUENCE DESCRIPTION:

GATCCATTTA NAGGCCAAAT NTCATTCTGC AGGTGCCTTC CCGATGGATT AAAGGTGCTT 60  
ATNTTTTTTT AAGTTTNAAG TAAA 84

SEQ ID NO:3388

SEQUENCE LENGTH:81

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03964

## SEQUENCE DESCRIPTION:

GATCGTGTTC ATTTTGNITT CCGATTCTAG ATATAAGTTT TGNATGGGCA GGAAGACTAA 60  
AATAAAAAGTT TTTAAGGTAA A 81

SEQ ID NO:3389

SEQUENCE LENGTH:81

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03965

## SEQUENCE DESCRIPTION:

GATCTCCAGA TGTAATTTCC CCTCTTTAAT TTAAANTAAT NTAAAGATTA CTAAAAACAAT 60  
AAAANCTCCT AAAAANTCAA A 81

SEQ ID NO:3390

SEQUENCE LENGTH:88

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03966

## SEQUENCE DESCRIPTION:

GATCTTTCTT TCCAAAACAT TTCTGGACAG TACCTGATTG TATTTTTTTT TTAAAAATAA 60  
AAGCACAAGT ACTTTNGNGN TTGTAAAA 88

SEQ ID NO:3391

SEQUENCE LENGTH:76

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03967

## SEQUENCE DESCRIPTION:

GATCCCCCA CAGCCCTGG TCAGTCTGCC CTTGTCACTG GTCTGAGGTC ATTAAAAATTA 60  
 CATTGAGGTT CCTAAA 76

5

SEQ ID NO:3392

SEQUENCE LENGTH:78

SEQUENCE TYPE:nucleic acid

10

TOPOLOGY:linear

CLONE:HUMGS03968

SEQUENCE DESCRIPTION:

GATCACAATC ATTTGAATC CCTCTCCTC ACTTTTTTTT CTAAGAAAAT AAACATTTTA 60  
 CTGTTTTTAT GGAATAAA 78

15

SEQ ID NO:3393

SEQUENCE LENGTH:73

SEQUENCE TYPE:nucleic acid

20

TOPOLOGY:linear

CLONE:HUMGS03969

SEQUENCE DESCRIPTION:

GATCACAGCT GACATTTACA AAATATTTTT NTACCTTAGA ATTTCTGCAT TAAATAAAAT 60  
 ATTTTGTTTT AAA 73

25

SEQ ID NO:3394

SEQUENCE LENGTH:68

SEQUENCE TYPE:nucleic acid

30

TOPOLOGY:linear

CLONE:HUMGS03971

SEQUENCE DESCRIPTION:

GATCTTTTGC TAATGCAATT AGNATTATGT TTTGCATGTA TGACTTAATA AATCCTTGAA 60  
 TCATAAAA 68

35

SEQ ID NO:3395

SEQUENCE LENGTH:67

SEQUENCE TYPE:nucleic acid

40

TOPOLOGY:linear

CLONE:HUMGS03972

SEQUENCE DESCRIPTION:

GATCCTCTAA ATNTGGAATT TTGATGTAAT AACTGCTAAT AAAATNATAT TGAAACTGTT 60  
 TTATAAA 67

45

SEQ ID NO:3396

SEQUENCE LENGTH:65

SEQUENCE TYPE:nucleic acid

50

TOPOLOGY:linear

CLONE:HUMGS03973

55

## SEQUENCE DESCRIPTION:

GATCAAAGCC CGGAAAGGCA AATGAAGCCT CATGTGTAGT GTAATAAAGN TGTCTGCTGT 60  
TCAAA 65

5  
SEQ ID NO:3397

SEQUENCE LENGTH:65

SEQUENCE TYPE:nucleic acid

10 TOPOLOGY:linear

CLONE:HUMGS03974

## SEQUENCE DESCRIPTION:

GATCGAAGCC TGTGTAAAT GCTACCAAT GGCAAAAAGC AACATAAAC AGTTTGATT 60  
TTAAA 65

15  
SEQ ID NO:3398

SEQUENCE LENGTH:64

SEQUENCE TYPE:nucleic acid

20 TOPOLOGY:linear

CLONE:HUMGS03975

## SEQUENCE DESCRIPTION:

GATCCCCAAT ATATCTACCA TTGTATGTTA AATAAATNAC CATTTTGTGTA GAAAAAATTC 60  
TAAA 64

25  
SEQ ID NO:3399

SEQUENCE LENGTH:71

SEQUENCE TYPE:nucleic acid

30 TOPOLOGY:linear

CLONE:HUMGS03976

## SEQUENCE DESCRIPTION:

GATCTGTAAA TNACTTTAAA AGCTATTTTA GTAATTAAA TAAATTTACT TTCTTGGTTT 60  
ATACTCTCAA A 71

35  
SEQ ID NO:3400

SEQUENCE LENGTH:63

SEQUENCE TYPE:nucleic acid

40 TOPOLOGY:linear

CLONE:HUMGS03977

## SEQUENCE DESCRIPTION:

GATCTCTATA NTTTTTTTA AATTTTCTCC AGCCTGGGTG ACAGAGCGAN ACTCCGTCTC 60  
AAA 63

45  
SEQ ID NO:3401

SEQUENCE LENGTH:63

SEQUENCE TYPE:nucleic acid

50 TOPOLOGY:linear

CLONE:HUMGS03978

EP 0 679 716 A1

SEQUENCE DESCRIPTION:

GATCTCCTGC TGCCTTTCCT GGAGTTTGTG AAATTNTNCC TGAATACAAG CCTATGCGTG 60  
AAA 63

SEQ ID NO:3402

SEQUENCE LENGTH:62

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03979

SEQUENCE DESCRIPTION:

GATCCAAGCA TAGTAGAAAA GCTTCATGTG TTTTAAAAAA TAAACAATAA CAAAAAATTA 60  
AA 62

SEQ ID NO:3403

SEQUENCE LENGTH:61

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03980

SEQUENCE DESCRIPTION:

GATCATGTGT TCTGGAGAGT GTTCTTTATT CAATAAAGTT TTAATTTAGT ATAAACATAA 60  
A 61

SEQ ID NO:3404

SEQUENCE LENGTH:61

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03981

SEQUENCE DESCRIPTION:

GATCTAATTT TTCAACCTT CACTATTTTG AAAATATAAC CAAGGCCGGT TCGGGTGGAA 60  
A 61

SEQ ID NO:3405

SEQUENCE LENGTH:60

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03982

SEQUENCE DESCRIPTION:

GATCATGAAA CTGATTGTAA AGCTTTTGA CAACTAATAA ATGTCTTGGT AATTGCTAAA 60

SEQ ID NO:3406

SEQUENCE LENGTH:59

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03984

SEQUENCE DESCRIPTION:

GATCAATGGA TTTGTTTACA ATGTGATATT TTCTATTAAA TCCAGTATTT TCAAATAAA 59

SEQ ID NO:3407

SEQUENCE LENGTH:58

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03985

SEQUENCE DESCRIPTION:

GATCTTGTA TAACTTATGA TAGAATGTAT CAGAATAAAT ATTTTAAACA GTGTTAAA 58

SEQ ID NO:3408

SEQUENCE LENGTH:53

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03986

SEQUENCE DESCRIPTION:

GATCATNAAA GTATACAAAA TAAATAAAGT AGGAGATTTT TTTGCTGTTT AAA 53

SEQ ID NO:3409

SEQUENCE LENGTH:121

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03987

SEQUENCE DESCRIPTION:

GATCTGTTTA GTGAGATTTA GCATGTGTGA ATAAAGTATA TGCAGGAGGA AATTGCTTTG 60

TNTTCCAAT CGGTAGAAAT TCGGGACCAT AAAAATTGTG TTTTACCATG TGGCCTACAA 120

A 121

SEQ ID NO:3410

SEQUENCE LENGTH:51

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03988

SEQUENCE DESCRIPTION:

GATCATTGTT AAAGGATTGC TGCAAATAAA TACACTTTAA TNTCAGTCAA A 51

SEQ ID NO:3411

SEQUENCE LENGTH:60

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03989

SEQUENCE DESCRIPTION:

GATCTTTAAA ACATTTTAA TGAACAAAGT TGAATAAAGG CACAATTAAG AACTGTCAAA 60

SEQ ID NO:3412

EP 0 679 716 A1

SEQUENCE LENGTH:53

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS03993

SEQUENCE DESCRIPTION:

GATCAACAG AAGCAGCCGT GGGCAAAATA CAATTCATT TAACAAATTG AAA 53

SEQ ID NO:3413

SEQUENCE LENGTH:521

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04020

SEQUENCE DESCRIPTION:

GATCTCATAG GACGGAGGGG GAAATGGTTT CCCTCCAAGC TTGGGTTAGT GTGTTANCTG 60  
 CTTATCAGCT ATTCAGACAT CTCCATGGTT TCTCCATGAA ACTCTGTGGT TTCATCATT 120  
 CTTCTTAGTT GACCTGCACA GCTTGGTTAG ACCTAGATTT AACCCTAAGG TAAGATGCTG 180  
 GGGTATAGAA CGCTAAGAAT TTTCCCCCAA GGACTCTTGC TTCCTTAAGC CCTTCTGGCT 240  
 TCGTTTATGG TCTTCATTAA AAGTATAAGC CTAACCTTGT CGTAGTCCT AAGGAGAAAC 300  
 CTTTAACCAC AAAGTTTTTA TCATTGAAGA CAATATTGAA CAACCCCTA TTTNGTGGGG 360  
 ATTGAGAAGG GGTGAATAGA GGCTTGAGAC TTTCTTTGT GTGGTAGGNC TTGGAGGAGA 420  
 AATCCCCTGG NCTTCACTA ACCCNTNTGG ACATACTNCC CACAACCCAG TTNGATGGGN 480  
 TTTCCCGTAA TAAAAAGGGN TNGGNNNTTN CCTTTTGAA A 521

SEQ ID NO:3414

SEQUENCE LENGTH:501

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04021

SEQUENCE DESCRIPTION:

GATCAGAAAT NACTGTGTCA TGGTGCTCAT TCACTGCAAA CTCCCAGTTG NAAGTCCTT 60  
 GGCTCCCCCG GAGGAGCAAG AATCTCATAG TTCAGAGACA CAGAGGGCCT TTAGCCCTA 120  
 ATNACCTTTT GGATGGGACT GCAACTCATG ACTATCCTGA TATTGGAAGA AAGGACTTTG 180  
 TTAATCTTCT CCCCATAGC TCTGCTGCGT AGGTCTACAT CTTACTCAGA ATCACTACAC 240  
 ATTCCTTTAG TCTCCTCCA AGCTCCAGAG CCATTGGTAC AAATGCTTTA TTGAAACTAA 300  
 ATACATANTN NACACAATGA GATGAAGACA ATATAGANGT NCGCATAGTC ATCATAATCC 360  
 CGTTCCTTGG CCGGTTGAGG CAGCTCAGTG GCTGAGCCCA GTCAAGCCAA CCCGGNAGTT 420  
 TCACTCACGG CNTTCAAGGN TTTTGATGCT AATCCTTTG GGTTCCTAC AGTTTATTAA 480  
 ATAAGTNGTC TGNGTGGGAA A 501

SEQ ID NO:3415

SEQUENCE LENGTH:485

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04022

SEQUENCE DESCRIPTION:



5 GATCTCAGTG AACTAATACA CAGCTTGAGC GTTCCATGT GCTAATGTTG CACATTACT 60  
 AAAAACTTT GGAAATGGAA AATAATGTAT TAGTGCAACA GTTGATGTGC TTCTTTGGGC 120  
 AAAGATATAG TTTTGTCCA CAATTTGTAC TAAAAAGCGA AAGAACATTG AAAACATAGA 180  
 CTTACTGGCT GTAGCAATGC TGGCCTGTTA ACTGATAACT AGAACTTAGG TTCACGTTTA 240  
 TGTAAGTGT GTAAACCTA GTAGAGCTTG CATAGTCGGG CACTCAGTAA ATGGTTTGGT 300  
 TCCTTTTGCC CCTTGGTAAG TTTATTTTAC CCATCCNCCC ACCTGCCCAT TCTGACTTTN 360  
 TATTAATC ANCCATGTGG GACCCAGNGG TGTTAATGN GGATGTTATT NCCAGAAGGA 420  
 10 GGATTGAGA AAAATTTGGG GATTNTCATT GCAGGTTAAC NATTCCAAAA ATNCTTTTGG 480  
 GTAAN 485

SEQ ID NO:3416

SEQUENCE LENGTH:471

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04023

SEQUENCE DESCRIPTION:

20 GATCTGTTTT TTCATCGAGG TNTCGAGGTA TNCTTTNAAA GATAGTGANA NGCAGACACT 60  
 GCTCCTTGTG CAGCTCTGGT ACCTCCTGCC CACTGCTGTC ACTCAAGCC ACTGGCAATG 120  
 CTTCTGCTCT CGTGTCTTGG AGGAAAATCA CCTGGGGGGA GGGGACTTCT TGTGGTAAGA 180  
 GCAAGTGCAG GTATGAAATG CGAAGATTGC CCCAGCTAAA AGTGGACAAG TCCGCTTTGT 240  
 GAGATGAATA CTTCTGAGA NNCNNNNCAA GTATCTCTCC ATTTACCAT TATGAAAACT 300  
 25 ATCATTAAAA AAAACAGTTT AGATGCCCTC TCCTTTTGAG GGAAAAAGGG TGCTTTTAT 360  
 TGTATAAAGC AGCGTCTTAT GTATTTTGAT ATACCATTGT TTGAACTTCC GTCTTTAGCT 420  
 GATAGATTCT CAAATATCCT NGATTTTGGG ATGTTTCAGTA TGTTTGAG N 471

SEQ ID NO:3417

SEQUENCE LENGTH:466

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04024

SEQUENCE DESCRIPTION:

35 GATCAAAATAT ATTTCAAGCT ATAAAAGCAG GAGGTTATCT GTGCAGGGGA CTGGCATCAT 60  
 GTATTTAGGG GCAAGTAATA ATGGAATGCT ACTAAGATAC TCCATATTCT TACCCGAATC 120  
 ACACAGACAG TTTCTGACAG GCGCAACTCC TCCATTTTCC TCCGCGAGGT GAGANCCCTG 180  
 40 TGGAGATGAG TCAGTGCCAT GACTGAGANG GANCCGACCC CTAGTTGAGA GCACCTTGCA 240  
 GTTCCCGGAG AACTTTCTGA TTCACAGTCT CATTTTGACA GCATGAANTG TCCTCTTGAA 300  
 GCATAGCTTN NNNAATATCT TTTCTCTCT ACTCCTCCNT CTGACTCTAA GAATTCTCTC 360  
 TTTCTGGANT CGCTTGAACC CAGGANGGCG GGAGGTTNCA GTAAGCCAAG GTCANTGCNA 420  
 45 CTGCACNTT AGCCTTNGGT NANAANTNGA GGTTCCATT TNTAAA 466

SEQ ID NO:3418

SEQUENCE LENGTH:464

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04025

## SEQUENCE DESCRIPTION:

5 GATCGCCAGG CTGATTGAGA AGAACAAGAT GAGTGACGGG AAGAAGGAGG AGCTCCAGAA 60  
 GAGCTTAAAC ATCCTGACTG CCTTCCAGAA GAAGGGGGCC GAGAAAGAGG AGCTGTAAAA 120  
 AGGCTGTCTG TGATTTTCCA GGGTTTGGTG GGGGTAGGGA GGGGAGAGTT AACCTGCTGG 180  
 CTGTGAGTCC CTTGTGGAAT ATAAGGGGGT AGTGGGAAAA GTGGTACTAA CCCACGATTC 240  
 TGAGCCCTGA GTATGCCTGG ACATTGATGC TAACATGACC ATGCTTGGGA TGTCTCTAGC 300  
 TGGTCTGGGG ATAGCTGGAG CACTTACTCA GGTGGCTGGT GAAATGACAC CTCAGAAGGA 360  
 10 ATNAGTGCTA TAGAGAGGAG GAGAGGAGTG TACTGCCCAG GTCITTGACA GGTGTAATTC 420  
 TCATTCANTT AAAGGTTTCA GTGTTTTTGG TTAAGGTGGA TAAA 464

SEQ ID NO:3419

SEQUENCE LENGTH:457

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04026

## SEQUENCE DESCRIPTION:

20 GATCACCTTC CTGTCTGGAG GCCAGAGTGA GGAGGAGGCG TCCATCAACC TCAATGCCAT 60  
 TAACAAGTGC CCCCTGCTGA AGCCCTGGGC CCTGACCTTC TCCTACGGCC GAGCCCTGCA 120  
 GGCCTCTGCC CTGAAGGCCT GGGGCGGGAA GAAGGAGAAC CTGAAGGCTG CGCAGGAGGA 180  
 GTATGTCAAG CGAGCCCTGG CCAACAGCCT TGCCTGTNAA GGAAAGTACA CTCGAGCGG 240  
 25 TCAGGCTGGG GCTGTGCCA GCNAGTCCCT CTTCGTNTCT AACCACGCCT ATTAAGCGGA 300  
 GGTGTTCCCA GGN TGCCCCC AACANTTCAG GCCCTGCCN NNTNCCAACT NTTTGAAAGA 360  
 GGAGGNCGCC TTCTTNGGGG GCTTCCAGGT TNGGNTTNC CCGGGNTTTT TTTTTTCCC 420  
 TTGGGTGANA NATGGGTNGT TTNGGNGCG GTNTTNN 457

SEQ ID NO:3420

SEQUENCE LENGTH:452

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04028

## SEQUENCE DESCRIPTION:

35 GATCTGGAGG GGTCAACGGA AGACGGAACA TGTCCACTTC CAGGCCCGAG CTTCTNAGCC 60  
 TGCCGTTTGC CACTCTCCAG CATCTGGCCC AGCCTGTCCA TCCTCATCTC TCTTCCTCCN 120  
 NNACTCCGTG CTCCCATCAC TNGGAACCAT TTGCATTNT TTGTCTCAGC TATATTGTCT 180  
 40 CACCTCTGAG TTTTGGCCA TGATGTTGGA TGCCATGGAA TGCCATATCN TCCCCATTAT 240  
 CTCCCCCTTG TNTGGATAAT TCCTACTCAT CCTACAATAC TGATTTTAT CTGTGCAAAG 300  
 AAGGTCTTCC CCAAGTGGCC TCTGGGTTNG ANAAGGGGNG TTCCTCTGGC TTNTTCCAGA 360  
 CTTTTTGT TTCTNCAACC AAAAGGCTTT AGGCACCGTG GGGGAAGGAG GGGTNTTNT 420  
 45 TNGTCCNAGG GAAAAAGNNT NGNGGCAAT GN 452

SEQ ID NO:3421

SEQUENCE LENGTH:450

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04029

## SEQUENCE DESCRIPTION:

5 GATCAAACT AACCTTTCAG CGTATTCTCA GCTATGACAC AGTGGTGCAA ACAACTGGAG 60  
 ACTCGTGGCA CATACCATAT GATGAAGACT TGGTAGAAAG ATGTTCTGT GAAGTACCAA 120  
 CCAAATGGCT TTGCCTCCAC CAAAAGACAT AGAGATTCTT ACCTCTATGC TAAGTTTGTG 180  
 TTTGGGTACC CTCTAGGTTG GCATCAGAGG CTCTTGAGCT GGTGTTTGT TAGGGCATTG 240  
 CCTCTGTCTT GAAGATAAAA GGATTNTATT AACAGCATTG ACATTGATTT TTTAATGAAA 300  
 TGAGATATAT CTTTTCATAA CCAGCTGCGT TTTTTTCCC TAACATTTGT TTTTGGAGGG 360  
 10 CTTATCAAGA GTTGGAGACC TTAGTGTAGA GCAAAACCTG CATTCTCCT ACTGGGCCAG 420  
 CTATTCCACT TAGGCTTGGG TGAATAANAN 450

SEQ ID NO:3422

SEQUENCE LENGTH:444

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04030

## SEQUENCE DESCRIPTION:

20 GATCCCAAGT ATTAGGAGCT ATTTCTTAAA TAGTTTAAAT TTGCCTTTGA AAAAAGTTCC 60  
 ATTACTTAAA AGTATTAATT TAAGCAAAAT CATGGAACAC ATTGACTAAA AAATACCTTT 120  
 TATTTTTACT CAACTTGTTA AAGGGGAGA TAAAGACTTT GGCAAATTG ATTAAGTGCA 180  
 CAAAATAATG TTATCCAAAC TGAGTAATTT ATTGCTGGTC TNGGGCTTGC CTTGTTTACA 240  
 25 CTAAAGTAGA ATTTACGTTG TTTCCACAAA TGGCAGATAT CAACTTTAA AGGNATTTAA 300  
 TAGTGACCTA TTCAATAAGG CANTCATCTG GGGTAGCAAA CTTTNTTTA AATCTNACAT 360  
 AACCTCAGGC TTTATAANAA NGCCACCATA ATTGGAAAAA TGGGGNTCCT CCCCTCTAAA 420  
 NGCCTTAAGG GATTCAAAGG CTCN 444

SEQ ID NO:3423

SEQUENCE LENGTH:439

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04031

## SEQUENCE DESCRIPTION:

35 GATCTTGTA AAATGCTGTT AGTATCCAAC CTAAAAATAT ATTAGTATAT GGGTTTTTAT 60  
 TAAAAGAATT ACTTTGAATT TNCTATTTAA TTCATATGTA AATAAAGGAA CATTTCATTT 120  
 40 CACTTAAAAA AATTATATCA GTTATTAGGC TGGGTGCAGT GGCTCATGCC TGTAATCCCA 180  
 GCACCTTGGG AGGCCAAGGC GGGTGGATTA CCAGAGTTCG GGAGTTTGAG ACCAGCTTGA 240  
 CCAACATGGA GAAACCCCGT CTCTACTAAA ATTACANAAT TNGCCAGGTG TGGTGGCGCA 300  
 TGCTGTAAAT CCTGGGCTAC TCAGGAGGCT TGAGGCAGGN GAATNGGNTT GAAAACCCCN 360  
 GGGGGNNAGA GGTTCGGTT GAGCTGAGNN TTGCGCCATT NNACTTCNN CCTGGGCAAG 420  
 45 GNGGGGNGNA ACCTNTNNN 439

SEQ ID NO:3424

SEQUENCE LENGTH:437

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04032

## SEQUENCE DESCRIPTION:

5 GATCTAAGAA ATCATGTGCA TATATCTTTC AGATTCTAT TTTGGGAAAN TGAAGGTTTC 60  
 TACAACATAT TGTTTCAGTG TTCAAATAAA CTGAAGGACT CAACATTACA TTTGAACTAT 120  
 ATCCTTCCTA GTGGGTTAGT GTGAAAAAGN GNTTGGCTGA TTCCTAAAC TCTGCCAGCC 180  
 CTGCAGTAAT CTCCAGGGNC NNGTTATTGT TCAGACATTC CNTGGTGATT CCTGGGAAGG 240  
 AAGCTTGGCT GCTCAGTTTC TGAGTCTGGG GTGAGATAAT GTTCTGGGAA GGGACATCTG 300  
 TTCTTTGGTG TAATCTCTCA TGGTGAATC TGCTCTGTAC ATCAGACAAT TGCATTGCTA 360  
 10 CCAAGTTTCA TACCAATAT TTGAAAGGTT GGTATTGAAT CTAAANCCAA ATATTAGTTT 420  
 TTNTTAAACT CATGGGN 437

SEQ ID NO:3425

SEQUENCE LENGTH:424

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04033

## SEQUENCE DESCRIPTION:

20 GATCCAAACC TTACACCTGA GTCTGTTAAG AGCGCCCTGC TACAGGAGGC CACAGACTGC 60  
 CTGATTCTNN NGGACCGCTG TTCTCAAGGA CGGGTAAAGG GTCTCCTGGC CAAAATTCCC 120  
 CAAAGCTGTG AAGACAGAAA AGTGGTGAAC TATATCAGAA AAGTCAGCA GGTTCCTGAA 180  
 GCGCACCCCT ACAATGGAAC TTAAGACTTG TATTACTTTC CCAAGAGGAA AGGATTTTTT 240  
 25 TCCCATCCCN NNTTGTATGA ATGGAGTTAT TTANGAAAA ANGATATTTT TACACGAAAC 300  
 TTTGTAAGTG AAAGCTGCTT TTCTTCTCT TTCTTCTCT TTTACCTCCA TAAGGAATAG 360  
 GGAANGTAGG ACCAAGANAN AATTGAACTC CTTCCCATTT TCTAAATAAA GGTTCCTGGG 420  
 GAAA 424

SEQ ID NO:3426

SEQUENCE LENGTH:422

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04034

## SEQUENCE DESCRIPTION:

40 GATCTCNGAG CTACAATACT CACTANATAT ANTTTCCAA TCAAATATN CTATTCTATA 60  
 TTCTAAGGGT TAATATGTGA TTATAGTGC CACTTGCCAC CATTTTTTA AATCAATGGA 120  
 CTGAAAAAGT ATTAATTTAG ATGGATGCGC AGATATACCC TCAGTTCAGT CATAGATTGG 180  
 AGTTTGCATA TAATANNNCN CCGGTATGTN GACACTATTC TAAATAGTTC TATTATGACT 240  
 GAAATTTAAT TAAATAAAN NGGTTGTAAA ATNGATGTG TATGTGTATA TACNGTATGT 300  
 GTACTTTTTA AAATAGGGTG TATGTCCCAA CCCTTTTTTA TACAGGNTG AATTTAAAAA 360  
 TACCATGGTT ATATACATAT ACCTNGNNTT NGTCCTAAAA TAAAGGNTT TNATGCACGC 420  
 45 NN 422

SEQ ID NO:3427

SEQUENCE LENGTH:408

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04035

## SEQUENCE DESCRIPTION:

GATCTTTCCA CCTCAGCCTC CTGAGTGGCT GGGACTACAG GTGCATGCCA CCAAGCCTGG 60  
 CTAACITTTT GTAGAGATAG GGTITTNCCA TGCTGCCAG GCTGGCTTAG AATTCCTGAA 120  
 TTCAAGTGAT TTGTCTGCCT CAGGCTCCCA AAGTGCTGGG ATTACAGGCA TGAGCCACAC 180  
 TGCACCCAGT CCATGCTACC CTTTTATAT GAAACACCTA TTAACACGGT ACAACAACAC 240  
 TTCAAAACAT ATTATTTGAA TTNGGCNTC TGATTTTTA GTCANCAATC CATTANGGCA 300  
 AANACCTNGT TTTCCAACT CAGATGTTCT CCAACTTACA CTAATGTNTG GTTTTTTGG 360  
 ACTTNGGTGN GGGGAAAAAN TTAACNNGT TTNNTTTN TTATCAA 408

SEQ ID NO:3428

SEQUENCE LENGTH:378

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04036

## SEQUENCE DESCRIPTION:

GATCTTAGCT TCTTAATCA GACTTTGTGA CTAAAGTT TGGGGTTTT CTTTGAAAGT 60  
 TTCCAGCCCT ATTCAGAAAG CAACTCTTGG CTGTGTGCAT TTTCAACTC CAAGCAGCCC 120  
 AGGGGTAAGT AAACAAAGTA TGGATGAAGG TCAGATTTN TTGTCANNNT CTGAGAAACC 180  
 TGGCAGCCTG CTGTTAACA CACAGGCCAG TATTGGGTTT TATTGAATTT GGTATGTGAC 240  
 CAAGGTGGG CTAAAGGATG GCGCAGGTCC TGGGCAGGAA AGAATTTTC CTTTATCACA 300  
 TAACTGTAAT ATTTGGTTGC TCAGCATAAG TNATGGAAGC AACCCTTAA TTTCTAATAA 360  
 ANTTGTGTTA ACCTCAA 378

SEQ ID NO:3429

SEQUENCE LENGTH:376

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04037

## SEQUENCE DESCRIPTION:

GATCACAACA CCAGTACCAG CACGAAGAGC CTCCTCCGA AAGAGTCTCG ACTGGACACC 60  
 TTCTGGGACT AGCAGTGAAT CGGGACACAA ACCACCCACC CCATTGGGAG AAAAACCAG 120  
 ACGCCAGGAA AAGAAGAAAC AACAAAGGCA GGAGAACAGC CACTTTCAGA CTTGAAAATG 180  
 AAAAAACCCT CAGTTGAGCC TGAGCCCCCG GCGCGGGGGC TGCTACACTA CAGGACACCC 240  
 AGCATCGGCT TTGACTGCAG ACTGTTACC CACACGAGCC CTGTGCTTTT GGTGTAAATA 300  
 ATGTACAATT TGTGGATGTC ATTGAATCTA GAGGACTTTC CCCTTTTAT ATTTGTATTA 360  
 ACTTAACTT ATTA 376

SEQ ID NO:3430

SEQUENCE LENGTH:368

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04039

## SEQUENCE DESCRIPTION:

GATCAAGCTT GTGTACTTGA CCGTTTTAT ATTACTTTT TAAGTATTCT TGTCCACATT 60  
 CTACTTCAGC TTTGGATGTG GTTACCGAGT ATCTGTAACC CTTGAATTC TAGACAGTAT 120

EP 0 679 716 A1

TGCCACCTCT GGCCAAATAT GCACTTTCCC TAGAAAGCCA TATTCCAGCA GTGAAACTTG 180  
 TGCTATAGTG TATACCACCT GTACATACNN NGTATAGGCC ATCTGTAAAT ATCCCAGNGA 240  
 NCAATCACTA TTCTTAAGCA CTTTGAAAAT ATNNCTATGT AANTNATTGT AAACTTTTTC 300  
 AATGGTTGGG ACAATGGCAA TAGGACAAAA CGGGTTACTA AGGTGNAATT GNCCAAAAAA 360  
 TTTTTTAN 368

SEQ ID NO:3431

SEQUENCE LENGTH:374

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04040

SEQUENCE DESCRIPTION:

GATCAATCTC AATTCCTTTT CATGCCCTCC TGCATTGCTG CTGCGTGGGT ATTTGTCTCC 60  
 TTAGCCATCA GGTACAGTTT ACACTACAAT GTAAGCTATA GGTGGAGCAT CAGCAGTGAG 120  
 TGAGGCCATT CTTTCATCCT AGGATGTGGC AATGAAATNN TGGTGCAAGT TCCTTTCTCT 180  
 TTTGTGAATC TTTCCCCCA TTTCTGTTT ACATGTAACC CAACAAAATG CAATTTCTAG 240  
 NGCCTTCTGT CCAATCAGTT CTTTCTCTG AGTGAGACGT ACTTGGCTAC AGATTCTGC 300  
 CTTGTTTTGC GACATTNNTC CCATTACAC AGNTATTTAN GGGGCTAATN AANNGGANAA 360  
 ATAAGGCTTA CAAA 374

SEQ ID NO:3432

SEQUENCE LENGTH:369

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04041

SEQUENCE DESCRIPTION:

GATCCTGGAG AACCTAAGAC TCCAAAAGCG TGGTACTGGA GGAGTGGACA CTGCTGCCAC 60  
 AGGCCGGTGC TTAAATATN CTAATTTGGA CCGACTAGGC AAATCANAGG TGGAGCTGGT 120  
 GCAACTGGTC ATCGATGGAG TAAACTATTT GATTGATTGT NAACGGCGTC TGGAGAGAGG 180  
 CCAGGATATC CGCATCCCCA CACCTGTCAT CCACACCAGG CATTAACTCC CCATCGNCCA 240  
 GCTGATGACT CAAGATTCCA AGGAGTTCTG CTCATTCTAA TGGTGGGCCG TTCTACTTGN 300  
 TCTGGACCTG NCCTNGNATC CCCNTNGNCC TNTNNTTCCT TAGTTAAAGA CTTNGTTAGC 360  
 TGATGNAAA 369

SEQ ID NO:3433

SEQUENCE LENGTH:358

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04042

SEQUENCE DESCRIPTION:

GATCGTGGGG TTGTTGGCAG AGGGCAACCC TGGGCCCCAC ACCGTGTGGA CAGGCAGACA 60  
 CCAGATTGTC CAGGAGCAGG AGCTGTCTGG ACTGCGCTGG CCCCGGACCT AGTGGGCCTT 120  
 CTCCTGGCTG CTGAGATGTC GTCTGTGACT GGCCTGGCTG GAGGGGGAGT GTTGACAACC 180  
 CAAAGCTGTT CTCCAGTCTG GGGAGGGAGA GGCAGGGTCC CCAATGTCCG AGCTGNATCT 240  
 GGACGCTGCT CTTAAAGGAC CTCCTGGGGN AGGGGAAGCG GTAGGNTCTG GACTGGGNAA 300

GATGCTGTAT GACCTCCCTG AAGNACCCGT GACTTCCCCA TGNTTTACCC TTTTGTGN 358

SEQ ID NO:3434

SEQUENCE LENGTH:354

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04044

SEQUENCE DESCRIPTION:

GATCTAGAAA GCAACTTGGA AGTGTAAGA GTCACCTTCA TTTTCTGTAA CTCAATCAAG 60  
 ACTGTTGGGT CCATGGCCCT GTGTTAGTTC ATGCATTAG TTAGTCCCA AATGAAAGTT 120  
 TCATCTCCCG AAATGCAGTT CCTTAGATGC CCATCTGGAC GTGATGCCGC GCCTGCCATG 180  
 TAAGAAGGTG CAATCCTAGA TAACACAGCT AGCCAGATAG AAGACACTTT TTTCTCCAAA 240  
 ATGATGCCCT GGGGTGGGGA GTGGTAGGGG GAAGAGCTCC CACCCTAAGG GGCACACACT 300  
 GAGTTGCTTA TGCCACTTCC TTGTTCAAAA TAAAGTAACT GCCTTAATCT TAAA 354

SEQ ID NO:3435

SEQUENCE LENGTH:354

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04045

SEQUENCE DESCRIPTION:

GATCATTAAAT GAGGAGCTGA TGGCCTCCCT GGACCAGCCA ACACAGACAN TGGTGATGCA 60  
 CCGCACTGAG CCCACTGCCC AGCAGAACCT GGCTCTGCAG CTGGCCGAGA AGCTGGGCAG 120  
 CCTGGTGGAG AACAACGAAC GGNTGTTTGA CCACAAGCAG GGCACCTACG GGGGCTACTT 180  
 CCGAGACCAG AAGGACGGCT ACCGCAAAAA CGAGGGCTAC ATGCGCCGCG GTGGCTACCG 240  
 NCAGCAGCAG TNCAGACGG CCTACTGAGC TCTCCACTCT GTTTCCCGCC TGGGCCATCC 300  
 AACCTTGAAG TCCTAAACCA CACCTCAGTC ACTAAAGGTC TGTTTAAAGT TAAA 354

SEQ ID NO:3436

SEQUENCE LENGTH:350

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04046

SEQUENCE DESCRIPTION:

GATCTAATTT ATTTATTTAT TGCCTGGCCG GTGACTCGGG GGAGGAGGCG ACCCTGTCAT 60  
 CTGTCCCACC TGCTGCTGCC CCTTGGAGCA GCCTGCACCT NCTCTCCTCC CATCCGGCAA 120  
 CAGTNTGAAA GTACGTGGAG GACGGGACCG GAAGACGAGA GAGGGCTGGA CATCCTGCCC 180  
 ACCGTNTCCC AGCCAGGGCA GGNAGAGGGA CCATGGCCCG NANGTCAAGG GGCCCGGATG 240  
 TGCACAGCTG CCACAGGGAG GGAGNTCTTG GGGAGATGGG CANTCAGGTG GCCCGTCCTT 300  
 GGTNGAGTGC ACANANTTGC GCGNACANAT CGGGGTTTTT CCTGGNTTNN 350

SEQ ID NO:3437

SEQUENCE LENGTH:348

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04047

SEQUENCE DESCRIPTION:

5 GATCTTGAAT CTCTTTCTTT GTTCTGTTTG TTTAGTTAGT ATCATCTGGT AAAATAGTTA 60  
 AAAACAACA AAAAAGTCTG TATCTGTTTC TAGCATGTGC TGCATTGACT CTATTAATCA 120  
 CATTTCAAAT TCACCCTACA TTCCTCTCCT CTTCAGTAGC CTCTCTGAAG GTGTCCTGGC 180  
 CAGCCCTGGA GAAGCACTGG TGTCTGCAGC ACCCTCAGT TCCTGTGCCT CAGCCCACAG 240  
 GCCACANTGA TAATGGTCTG TTTAGCACTT CTGTATTTAT TGTAAGAATG NTTATAATGA 300  
 10 AGATACACAC TATANCTACA AGAAATTATA AATGTTTTTC ACATCAAA 348

SEQ ID NO:3438

SEQUENCE LENGTH:347

SEQUENCE TYPE:nucleic acid

15 TOPOLOGY:linear

CLONE:HUMGS04048

SEQUENCE DESCRIPTION:

20 GATCTGAGCC ACCCTCCCCG CACAGCCCTG CACCCCGCCC CTAGGGTTGG CAGNCTCANT 60  
 TGGCCCTGG CAGAGGAACA AGGACACAGA CATTCCCTCA GTGTGGGGGG CAGGGGACAC 120  
 AGGGAGAGGA TGGTTGTCCC TGGGGAGGGC CCTCTGGCCC CAGGCAACCT TAGCCCTCA 180  
 GAACAGGGAG TCCCAGGACC CAGGGAGAGT NTGGGGACAG GACAGCCTGT TTCTTNTAGC 240  
 TTCTTGGGGT GGGAGGCACA GGGGCAAAGC ANTACCCAG GAAAANTGGG AGGTGGTGCT 300  
 25 GGTGCTCTCT CCAGGNCCAC CATGCTGGGA GAGGCGGCCA GAGCTTN 347

SEQ ID NO:3439

SEQUENCE LENGTH:346

SEQUENCE TYPE:nucleic acid

30 TOPOLOGY:linear

CLONE:HUMGS04049

SEQUENCE DESCRIPTION:

35 GATCTTCCCT GGNGGCCTTC GGCTGCNTGC NTGCCTGAGG TCCNGCTGC CAGTCCCGGG 60  
 CCCTGGAGAG CAGATGCTGT CTTGTNATGT ACAGGAGGAC CTTTAAAAA AATCAAGTTT 120  
 CTATTTTTN CTGGTAGTCC GCATACCCAT ACCCTCTGTT TTTNAAAGGC AAAGGCCAAT 180  
 NAGTCCCAT TTGTAGCATG GCACCAGGGT CTTAGGCCTA GTCCTCTCAT TCCTCCACAC 240  
 CTCGAGATG GTCAGTGTGT CATGGGAAGC CCACCCACAG CTCTGCCAGT GCTCTCTGGG 300  
 40 CCTGGNTCCN AGTCAGTGGT GGCCACGATG CGGTACAGGG CATCCN 346

SEQ ID NO:3440

SEQUENCE LENGTH:343

SEQUENCE TYPE:nucleic acid

45 TOPOLOGY:linear

CLONE:HUMGS04050

SEQUENCE DESCRIPTION:

50 GATCCATGTG ATTATTAATA TGACTGTAGC TGAGAGCTCT AATTTNCCTG TCTTGAACT 60  
 GTATAAGANC TCATGTGATT AAGTTCACAG TTTATTGTTT GTNTGTTTAG TATTTNAGAA 120  
 ATATAACAGC ACTACTAATT AACTAATGTC TNTNATTTAT NATATTATGA TAAAGTAAAA 180  
 NTTTCACTTG CATTAGTCT AACTGAGAA GGTAATTACT GGGNGNGAN TGAGCAGCTT 240

55



TGACTTTGAC AGGCGGTTTG TGCAGGAAAG CACAGTGCCG TGTTGTTTAC AGCTTTTCTA 300  
GAGCAGCTGT GCGNCCAGGG TAGAGGAGTG TNGAAATTCA TTN 343

5 SEQ ID NO:3441  
SEQUENCE LENGTH:340  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
10 CLONE:HUMGS04051

## SEQUENCE DESCRIPTION:

GATCTGCTCA GAAAGGAAGA GGCAGGCGCC AGGGGGAACC CCCTTCGTGT TTTGTAACCC 60  
TCCCTTTNAG GTGAAGCCCT TTTTCTTGCT AAAACCGGCA ATTCTCCGGT TAGAAATNTT 120  
ACTTGGTGTT TTTTGGTTTT GTGAAACGGC CGTCCCAAAG CTGGCTGGAT TCCTAGAAGA 180  
15 GTCTGTGTG AAGGCATCTT TCAAGCCCTC GCTCTGGTTC TNAGGGCAGC ATTTTCCAGG 240  
CGGGTTTGT TTGCAATTCT TGGAGCCTCT CCGNGNAGCA ACCAGACGGG AGATTTTAAT 300  
TTAAGCTGT TCATGCTGGG NCTGACAGCC TGCAGGTTN 340

20 SEQ ID NO:3442  
SEQUENCE LENGTH:339  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS04052

## SEQUENCE DESCRIPTION:

GATCCTTGGG CTGGCCTAGA ACCAGTATCT GTAGTGGATA TAAGCCAACA ATACAGCAAT 60  
ACTCAAACAT TCACAGGCAA AAAAGGAAGA TACTTTTNTT AACATTCTG AAATCAACT 120  
GGAAGCTTCA TGTGTCAGGA ACATCTTGGA CAAAACCTTA NGTTGTGTG ATATAAATTT 180  
30 ACCCAAAGAT GATGNCCTTG ATTGGNTAAT TAGTAAGGTC TTTTGTAT TTTNCATCGT 240  
ATCAGGTATT GTTGATATTA GAGAAAAANG TAGGATAACT TGCAACATT AGCTCTGGAA 300  
GTACCTACCA CATTTNGAG ATTTACCGTT TCCATATTN 339

35 SEQ ID NO:3443  
SEQUENCE LENGTH:339  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS04053

## SEQUENCE DESCRIPTION:

GATCTGCCGT TNATGTTGCT TTCTCCTTTG TCCTCTTGGA CTTGAGGGCA TTGTGAAAAG 60  
CTTGCTGTG ATTTAAAAAT GCCAGCAATT TTAATCTAGC AGTGTGAAG CTGGGAATTT 120  
TTTGGCGCAA TCCATGTAGC AGTGACCCAG GCTTGGGAGC CAGAAACAAG TGTGACCTGG 180  
45 GATTTNATTT AACACAACCTG TTGCCAAAAGA GTTGGCTTTG TTTATTTGGT TTTGGCGGGG 240  
AGAGGAGTGG TATTTNATGC TTTCTGTGGA CANTGTAACC CTAAACACAN CANGTATTTT 300  
AANTGCCACC TACATAANTA AACCATANGC NTATTGAAA 339

50 SEQ ID NO:3444  
SEQUENCE LENGTH:339  
SEQUENCE TYPE:nucleic acid

55

TOPOLOGY:linear

CLONE:HUMGS04054

SEQUENCE DESCRIPTION:

5 GATCTACATA AAAACTGCTA CATGNCAAAA ACCACACCTA AAGAAATTTT AAGAATTTGG 60  
 CACAGTTACT CACTTTGTGT AATCTGAAAT CTAGCTGCTG AATACGCTGA AGTAAATCCT 120  
 TGTTCACTGA AGTCTTTCAA TTGAGCTGGT TGAATACTTT GAAAAATGCT CAGTTCTAAC 180  
 TAATGAAATG GATTTCCAG TAGGGGTTTC TGCATATCAC CTGTATAGTA GTTATATGCA 240  
 10 TATGTTTCTG TGCATGTTCT CTACACAATT GTAAGGTGNC ACTGTATTTA ACTGTTGCAC 300  
 TTGNCAACCT TTCAATAAAG CATATAAATG TTGGTTAAA 339

SEQ ID NO:3445

SEQUENCE LENGTH:334

15 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04055

SEQUENCE DESCRIPTION:

20 GATCAGCCTC TTCCTCTATA AACAATGACC AATTAGACGT TTCCGTAATT CCATGTATTA 60  
 TGTATAGTAC ACTCTATAAA TGTAATGTA ATGCTTGTCT AAAAAGTGCA ATTTATTGTA 120  
 CATTGTCCCA ACAAATGTTT ACTTTTATAA TCGTTATGAA CTGGAATTGG ATTAGTATCT 180  
 TGTTTTATG TGTGAATGAA GCCTTGTGAA ATAAACAAAT GCAACTGAGA AGGTAACAAG 240  
 25 GTGACTGTTT TTGTGAGCCA GTGATGTTT CAATGCTTTG TGTGCCCCCT TTGGCCCCAT 300  
 TAAGCAGTAA TAAACATTG TTCTGAAGTC CAAA 334

SEQ ID NO:3446

SEQUENCE LENGTH:334

30 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04056

SEQUENCE DESCRIPTION:

35 GATCCAAGAA GCGGGTCCCT GAGACGGGGG GTGGCTGCCC TCCCAGACC ACCCCGGCAG 60  
 CCTGAGCAGN TCCAAAGCAC TGGCTTGGGG TCCGAGACCT TCAATGTAAA GCAGGCGGAA 120  
 TGGGGGGACA GGACAATTC TCCCCTCCA GGGGCTCCAG GACTCTCCCT GGGGGGCCCA 180  
 CCTCTTGCCC CCTAACCTCT TCCCCCTTT TCTGCCCCCG TGGGGAGGAG CCCCTTGATC 240  
 CTGCTCCGTG CCCAACACAT GCCCTCTCTG TACATCTTT GGTAAATNAT GAGAAATAAA 300  
 40 GGAAGTGGAC GCAAAGTGA TCGGCAGCA GAAA 334

SEQ ID NO:3447

SEQUENCE LENGTH:332

45 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04057

SEQUENCE DESCRIPTION:

50 GATCCAATCT CAGTGTCTAA CTCATCATCC CAGATTATTC TGAAGTGGA ACCACCCTCC 60  
 GACCCCAATG GCAACATCAC CCACTACCTG GTTTCTGGG AGAGGCAGGC GGAAGACAGT 120  
 GAGCTGTTCC AGCTGGATTA TTGCCTCAA GGGCGAGTCC AGTCATCAGC TCCGCTGTAA 180

55

EP 0 679 716 A1

GCTGTTGGCC CTGCATTCAA GTAACCAGAA CCACCCGTGA GAGCTGCCAC CAGGTANTGT 240  
CACTCGAAGC TTCCTTTTTT TTTTTTTTNA ATTCCGGAAA GTTTAANTCT GTANTCCCAG 300  
GGGNCCATTT AAANANGGTT TTTTTTTGTA AN 332

SEQ ID NO:3448

SEQUENCE LENGTH:332

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04058

SEQUENCE DESCRIPTION:

GATCCAAAAA AAGCTNGAAG CCTACATTTC CCAGAGCCCC TTTCAGCTTG AATTCCAAAT 60  
GTGACTTAGC TTCCTCTATG CAGATGTACC TACTTGAAAC TGGGAAGGCC AAATNAGATA 120  
GAGGNAATNT TTCTGCCAAC AAACAGCCAC AGAGCATTTT ATTTTCTAG AAGAGCAATA 180  
ACAGAGACCC CAGGGTGTGG TGTGGCAGGA CGAGGAGCAT CCATTTTGCT GGNNGGGGATT 240  
GTGGCTAAAA TAATGNGGCT CTGGAGCCAG CAATNGGCAG CATCTTCATG ACTTCCAGN 300  
TTCCAGGCTG TAAGCAGAGA TAGCATCTCT TN 332

SEQ ID NO:3449

SEQUENCE LENGTH:326

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04059

SEQUENCE DESCRIPTION:

GATCCACTAT ATGCCTCAGC ACATGGAACC TTAATGACCA AAGTGAAGAG CAGATTATTC 60  
ATACGGTGTA ATAAGCATCT GGAATGGACC CATCCGTGTA CTTCAATCAA ATGTGTAAAT 120  
GTCATATCA TTCAGATTTA TAAAGCTAGT AGTGATAGT CAGAAACAGA ATCAAAGTTA 180  
GATATACATT TTTAAATATT TACTGCATAT GAGGCTTTCT GTTAATTTT TAATGTGAAT 240  
AATTATATA TTGCACATTC TAGGGAATAA TATTGATTGT ATGNCTACTG TGCTGCATTA 300  
AGAAAATAAA ATTCCTATAT NCCAAA 326

SEQ ID NO:3450

SEQUENCE LENGTH:329

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04060

SEQUENCE DESCRIPTION:

GATCAGAAAA ACTGAAGATG GAAGTTTGG CCGGTGCTCA TTAGACATGA GTCCTCACTC 60  
TGTNTCCTGA GCCCGTTTCA TTCTTCCAAC CTCCTGCCC CCACACACTT ATCCAGACA 120  
CAACACCATG TGGTCTGGAG GTCCCAGCCC CCACCCTAAA AAGGTTATCC CNGAGAACTC 180  
CACCAGACTT GGGAGCCCAA GTGCAGTGCC TGGNGCTGCT CCCATCTGCC GGGCCCNNTC 240  
TTTCCTNGCA ATTGGTTTGN ACTCACTGGG CTGTGCTCTN CCCTGTTTAC CCGATGNNG 300  
GGAAATAAAG GCCCTTTTGC CTCCTGAAA 329

SEQ ID NO:3451

SEQUENCE LENGTH:325

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04061

SEQUENCE DESCRIPTION:

GATCTGGCGC TTCTACTTTG AGGGCTTCTT TGACCTCATT GCTGTGGTAN GCCGGCGTAG 60  
 TCCAGACCAT CCTATACTGT GACTTCTTCT ACTTGACAT TACAAAAGTA CTCAAGGGAA 120  
 AGAAGCTCAG TTTGCCAGCA TAAGTGCCAA AGGCCATCAC CAGCATCTGT CCTTCAGGGT 180  
 GCTCGGACAG ANTTNTTACC ACAGCAANGG CATAAGGTGC TTTATACGGA AANTCAGNAA 240  
 CTTAACTCTT TTGTTGCAGN TAGTCATCAG TGGCTCTGTA AAAACGGAGG GGGAAAGNGN 300  
 CNGGAGGTTT CTGTTAATG CATCN 325

SEQ ID NO:3452

SEQUENCE LENGTH:324

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04062

SEQUENCE DESCRIPTION:

GATCTGATTT TATGTTCTGA ACTTCTGTGA AAGAAAGACA CAAGGACTTT TCAAAGACAG 60  
 TTTATATCTT TCCAAGGCAG GAAGCTTTGC ATTTGCAATC TTAGTGTGT GTCCCTTCT 120  
 GATTTTCAAA TACATCACAC CTGCCTTCCT GTTTGGGAG CAAAGATGTA ATTTCAATTC 180  
 CCTTGCTAC CGTCCTTATT TAAATNATTT CCATTCTAAG AGATTTNGT NATTTNNNTA 240  
 AATGTAATCT GAGCACTTN TNGTATTCTA AAAGATAGAT GATATCAGAT AAATATGTTG 300  
 TACATTTTGA TAAAAATTAT TTN 324

SEQ ID NO:3453

SEQUENCE LENGTH:339

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04063

SEQUENCE DESCRIPTION:

GATCTGGAAG ACAGACGTAC AGCTTGGAGG GCAGGGGGAC TCTAAGGCAA GGAGATTAC 60  
 AGTTGGGAAG GAGGCAGTGG CAGAGGGGTG AGGGACAGGG GCCCTTAAGT CCAGCGAGGA 120  
 AAGCTCNNTG TGGGCCCGCT CTACGCTCCG TTTGGGGTGA CCTGGAACGC CTCTTCTCCC 180  
 AGCTCCCTCC AGCCATCAGC AGCCTCTTGT CAAGCTTCTG CCTCGCCCCA GTCTATCCCC 240  
 AACCCCAAAT CAAGACCACC TTTCTTCAGG GTCATATTT ATTCTTTGTT CCTTTTCTT 300  
 TTTGTAAGAA ACATTCACAA AAACCAAGTGC AAAACCAAA 339

SEQ ID NO:3454

SEQUENCE LENGTH:317

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04064

SEQUENCE DESCRIPTION:

GATCTCAATG CTGTCTGGGG ACCCTGAAGA GTTTTNTNAC CTGTTCAAGT TCATCTAACC 60  
 TTCCAATGTN TGATGTTCTT GCCAAATTC TGCCTGATTC TGGGTCCGTC CTGACCTCCA 120

AAGGTCAGNT TGGTGCTTGA GGTCTCCNTG CTCTGGGTGG CAGTGGTAGC AGCAACAGCA 180  
 GCAGCAGCAG CAGCAGCAGC AGCAGAGACC TNTCCACTTT CCCTTAGCCC TNTGNTGGGT 240  
 AGAGGGAAC TAAAGGACTT CCTCCAGNNG CNTTTAATNT GGGAAATGGGT AAGAAGGTTG 300  
 NGCTCCNCTG TTNGTTN 317

SEQ ID NO:3455

SEQUENCE LENGTH:315

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04065

SEQUENCE DESCRIPTION:

GATCCTCAAA AAACCCAAAA ACACCATTCT CTAATAGTCA TGACAAATGG CTTCAGTATG 60  
 GCTTGTTTT NATTTNCCAG ATGGCTTTT CTCTTATTT TNGAAGCCCC AGTCCTTGAT 120  
 TTTACAGGTA ACTTTCAAAA CATCATGATG CTGCCAAATG TACTTTTGTA AACTTAAACA 180  
 TTATGATTCC TGTATTATT CAGTGAGAGC TACAGTGTGA TATTNCAGAG TCTATTAAAT 240  
 AAAAATGTGA GTTTGAATTA CACCATCTGT GCCAATTACA AAGCAATTAA AGGATTATN 300  
 TNTNATGAAA AAAAN 315

SEQ ID NO:3456

SEQUENCE LENGTH:312

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04066

SEQUENCE DESCRIPTION:

GATCTGAGGC TGTGTCTCTG CCTTGTTTT AGAGGACTTC AGCGTCCAAG ACTGGGGCCC 60  
 ACCNTTNTCA CCAGCACTAA ATGCACTAAC AAGGACTCCA GACCTGCAGC CCCAGACCCG 120  
 CCGTAGTATA AGCCTAACAA GCAACANGTA GCACCTTAGT CTTTGTTCCA GGAGAGCTGA 180  
 GCAAGCTGGT GAAACCACTC TCCTTCCTTT AAACANC GTT TCAACCANCC TTNCNTGGA 240  
 GCCAACNTGT AAAAAGTGGG TTGATTGCTG ACAGNATGGT CTTCTTCCC TGGATTNAG 300  
 ACATACCACT TN 312

SEQ ID NO:3457

SEQUENCE LENGTH:309

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04067

SEQUENCE DESCRIPTION:

GATCTTCCG GGGCCTACAG GCGTGTAAGA CAGCTTGGTC TGGTCTGTGC AGAAGTGGGG 60  
 AGTGATGGC AGGTTGCGCA GCCTAACATT GTTCAGGCGC ATGGCCCTG CCGTGTGTAC 120  
 ACGAACTCGG CTTCTTTTGT CTTAGGTACG CCAAGGGCAG GTTCTGGAG ACTCCCTTGT 180  
 GCCCGGGATG GCAAGGGCAC CGGGCTGGCG TTTCCACATC TGTCTTCATT AGCAGANNAG 240  
 TGATGATGGA TTTTATTTC CTCACACTCC AGTTTGTAAAT AAAATGCCAA ATTCTGTCAG 300  
 CTATCCAAA 309

SEQ ID NO:3458

SEQUENCE LENGTH:309

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04068

SEQUENCE DESCRIPTION:

GATCAGCACC ATTTGTGGTA TGTTCGGTGA TGAGCGTTTA GTGAGCCTNN TGGCTGCAGA 60  
GCACTATGAA ATCATGGTAC GTAGTCCCGG GCACCTGTCG TTATTCCTAT ATCCTCCTGC 120  
AACTGTGGTT TGAAACTGCG CATTCTCTAG TAGTATATAT CGTGCCTGTC TTCAAAAACA 180  
TTTCCCTTNN GTATACTCAT NCCCCCAGG CATTGGGGTA GTGTCAGTCG GACTGCACAG 240  
GGAACACGGT TTCCAGTGGC TTGGCCCT ACTCGGGAAA CGTCTGCCTG TTCTCGATNG 300  
TGATGGGGN 309

SEQ ID NO:3459

SEQUENCE LENGTH:308

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04069

SEQUENCE DESCRIPTION:

GATCTAGCTG GTCACGACGA TGTTCACACC AAGGTCACAG GAGCATTGCG TCGCTGATGG 60  
GGTTGAAGTT TGGTTTGGTT CTGTTTCAG CCCAATATGT AGAGAACATT TGAAACAGTC 120  
TGCACCTTN ATACGGTATT GCATTTCCTAA AGCCACCAAT CCATTTTNG GATTTAATGT 180  
GTCTGTGGCT TAATAATCAT AGTAACAACA ATAATACCTT TTTNTCCATT TTGCTGCAG 240  
GAAACATACC TTAAGTTTTT TTTGTTTTGT TTTGTTTTT TTGTTTTNG TTTTCCTTA 300  
TGANGAAA 308

SEQ ID NO:3460

SEQUENCE LENGTH:351

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04070

SEQUENCE DESCRIPTION:

GATCAAGCAG AGAAANTAAT TAATTCATG GGAATAAATG AACTAGTGAG GATAATATTT 60  
NCATAATTNT TNATTGAAA TTTTGCTGAT TCTTAAATG TCTTGTTC CAGATTTCAG 120  
GAAACTTTTT TCCTTTTAAG CTATCCACAG CTTACAGCAA TTTGATAAAA TATACTTTTG 180  
TGNACAAAAA TTGAGACATT TACATTTCCT CCCTATGTGG TCGCTCCAGN NCTTGGGAAA 240  
CTATTCATGG AGTATTNTA TTGTATGGTA ATATAGTTAT TGCACAAGTT CANTAAAANT 300  
CTGCTCTNTG TATAGCANGG NNNGGGTTGG GGGGGCGGGN GGNGGGGGG N 351

SEQ ID NO:3461

SEQUENCE LENGTH:305

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04071

SEQUENCE DESCRIPTION:

GATCAGATAG TTTCTGAGG CTAAAATGCC CCAACATGTA AAAGACTGCN ACAAGGGTTA 60

ATGAGCCAGG AACTGCCGAT GGTAACCTAC ATCTCTATAA TTACCATAGG ATATATATGA 120  
GTACCATAGG ATTCTTTTGC ATAAGTGTAG AAAGTACAGA CAACACCCTC CCGTGTTTGC 180  
TATTAGAGTT TTTANTGTTG ATTGGAAAAA GGGAGATTCA CTGTGTGCCA TTCTTGGTAT 240  
ACGTTTGANGA AATTACATCA CTAGTACACA CNGNGGNNNT TCCACATTCA CACGCCCCAG 300  
CTCTN 305

SEQ ID NO:3462

SEQUENCE LENGTH:303

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04072

SEQUENCE DESCRIPTION:

GATCAAGCTA CAGATATGGG ATACAGCAGG CCAGGAGCGA TTTACACCA TCACAACCTC 60  
CTACTACAGA GCGCAATGG GTATCATGCT AGTATATGAC ATCACCAATG GTAAAAGTTT 120  
TGAAAACATC AGCAAATGGC TTAGAAACAT AGATGAGCAT GCCAATGAAG ATGTGGAAAG 180  
AATGTTACTA GGAAACAAGT GTGATATGGA CGACAANNGT GTTGTACCTA AAGGAAAAGG 240  
TGANCAGATT GCNNGGGAGC ATGGTATTAG GTTTTTTGAG ACTAGTGCAA ANGCNGGTAT 300  
AAN 303

SEQ ID NO:3463

SEQUENCE LENGTH:303

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04073

SEQUENCE DESCRIPTION:

GATCCGGTCA TACATCCACA TCAGGCCTGG CCAGCTGGAT GTTCTTAAAN AGTTCACAA 60  
GCAGATTACT GCACGGGCAA CAAAGGATGG GACTTTTGTC ATTTCAAAGA CATGATGTAT 120  
GGGGATTAGA AAGAACTCAA GACACTCCTG CTTGATACAG AACAAAAAGA GCTTAACAGG 180  
ACCAACAGGG CTTAAGCCCA GACTTGACGT AACAGAAATG TGCCAATAGG TAATAGGTAA 240  
TTTTNCTTTC TCTGACTTGT TTTGTTTCT TGAATAACA CTGTTGTGTG GCTAGAAAGG 300  
AAA 303

SEQ ID NO:3464

SEQUENCE LENGTH:348

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04074

SEQUENCE DESCRIPTION:

GATCTACTTT CACATTCTCA AGTTTTNTC ATCTGCATTA GAGGTGCCCA GTAGGTCCC 60  
AGGTTCCAGC GTGCCCTCC CTCAGACACA CGGACACAAT CAGCCGAGAA GTTCCTGGTC 120  
TGAATCAGGA GAATGTGGAG GGGTGGGGG TGTCAGTGGA AAGGCATAAG GCTGAGCTGA 180  
GACCAGTTGC TGGTGAACT GGGCCAATCT GGGGAGGGA ACATCCTTGC CAGGGAGTTT 240  
CTGAGGGTCT GCTTTGTTA CCTTTCGTGC GGTGGATTCT TTTAACTCC GTCTACCTGG 300  
CGTTTGTGTA GAAATGTCAG ATAGGAAAAA AAAAACCATT TGAGTAAA 348

SEQ ID NO:3465

SEQUENCE LENGTH:299

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04075

SEQUENCE DESCRIPTION:

GATCTGACCT GGTGAGATTA TTTCTNATGA CCTCATCAAA AAATAAACAN TTCCCAATGT 60  
TCCAGGTGAG GGCTTTGAAA GGCCTTCCAA ACAGCTCCGT CGCCCCTAGC AACTCCACCA 120  
TTGGGCACTG CCATGCAGAG ACGTGGCTTG GCCCAGAATG GCCTGTGCCA TAGCAACTGG 180  
AGGCGATGGG GCAATGACAG ATACANCAGA ACANTGCTTT TGAGGCANGC TTCTTCCCTN 240  
GNGGGTNGGT TGTNATGGCC NTGGCTTTTT NAGTTGGNG NCATTANAT TAAGGTTN 299

SEQ ID NO:3466

SEQUENCE LENGTH:415

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04076

SEQUENCE DESCRIPTION:

GATCTACGTN ATCTCAGGGC AGTTCCTACA GATGAAGCAA GAGCTTTNC AGAAAAGAAT 60  
GGTTTGTNAT TCATTGAAAC TTCGGCCCTA GACTCTACAA ATGTAGAAGC TGCTTTNAG 120  
ACAATTTTAA CAGAGATTTA CCGCATTGTT TCTCAGAAGC AAATGTCAGA CAGACGCGAA 180  
AATGACATGT CTCCAAGCAA CAATGTGGTT CCTATTCATG TTCCACCAAC CACTGAAAAC 240  
ANGCCAAAGG TGCAGTGCTG TCAGAACATC TAAGGCATT NTNTTCTCCC CTAGAAGGCT 300  
GTGTATAGTC CATTTCACAG GTNTGNGGAT TTAAATATAT TNGTAATNCT NGGTGTCACT 360  
TTTGGTGT TTATNACTCA TACTTATGGN TTTTCCATG NCCTAAGNCT TTTN 415

SEQ ID NO:3467

SEQUENCE LENGTH:295

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04077

SEQUENCE DESCRIPTION:

GATCCACCTT CTTCTTAGG TCCCCTCCTC CATCAGCAAA GGAGCACTTC TCTAATCATG 60  
CCCTCCCGAA GACTGGCTGG GAGAAGGTTT AAAACAACAA AATCCAGGAG TAAGAGCCTT 120  
AGGTCAGTTT GAAATTGGAG ACAAACTGTC TGGCAAAGGG TCGAGAGGG AGCTTGTGCT 180  
CAGGAGTCCA GCCGTCCAGC CTCGGGGTGT AGGTTTCTGA GGTGTGCCAT TGGGGCCTCA 240  
GNCTTCTCTG GTGACAGAGG CTCAGCTGTG GCCACCAACA CACAACCACA CACAN 295

SEQ ID NO:3468

SEQUENCE LENGTH:292

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04078

SEQUENCE DESCRIPTION:

GATCAAAGCA CTGGGCTTGT CCAGGCNCAT AATAAATGCT CCATTGAANG TACTATTCTN 60



GTTTCCACT GCTGTGAAA CCTCCTTGCT ACTATAGCGT CTTATGTATG GTTAAAGGA 120  
AATTTATCAG GTGAGAGAGA TGAGCAACGT TGTCTTNCT CTCAAAGCTG TAATGTGGGT 180  
TTNGTTTAC TGTTATTG TTTGTNGTGT TATCCTTTT TCCTNGTNAN TTGCCCTTCA 240  
GAATGCACTT GGGAAAGGCT GGTTCCTTAG NNNCTGGTT TGTGCTNNT NN 292

SEQ ID NO:3469

SEQUENCE LENGTH:291

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04079

SEQUENCE DESCRIPTION:

GATCTCTTAA GAGATGATGG ACTTATGTAT GTTACAAGAC TTCGAAATGT TGGAGTCCAA 60  
GTNGTTCATG AACATATTGA GGATGGAATT CATGGAGCTT TATCATTCAT GACTTCACCA 120  
TTTTATTAC GTCTAGGTCT TAGGATAAGA GATATGTATG TAAGTNGGCT GGATAAGANT 180  
TTATAAATAT GTGATGTGTA TGTATAGCCC TTACATAGTG GATTGTAATT NGTGATATTT 240  
TGTGGTTTTG GAGCAAAGAN CAATGTCATT TGAGTTATCT AAATCTACAT N 291

SEQ ID NO:3470

SEQUENCE LENGTH:290

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04080

SEQUENCE DESCRIPTION:

GATCTTTTGA TTCCTCTTGG GCTGAAGCAG ACCAAGTTCC CCCCAGGCAC CCCAGTTGTG 60  
GGGGAGCCTG TATTTTTTTT AACAACATCC CCATTCCCCA CCTGGTCCTC CCNCTTCCCA 120  
TGCTGCCAAC TTCTAACCGC AATAGTGACT CTGTGCTTGT NTGTTTAGTT CTGTGTATAA 180  
ATGGAATGTT GTGGAGATGA CCCCTCCCTG TGCCGGCTGG TTCCTCTCCC TTTTCCCTG 240  
GTCACGGCTA CTCATGGAAG CAGGACCAGT AAAGGGACCT TCGATTAATA 290

SEQ ID NO:3471

SEQUENCE LENGTH:287

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04081

SEQUENCE DESCRIPTION:

GATCCAAAGT CCTGTGGTTA ACGCCTTCAT TTATAGATGA GGCAGCTGAG GCCTGGGGAT 60  
GTGAACAACC TGCTCACAGT CCTCATTTAC TGGATTGAC TTCAGCCAGG TGAAGTGGAA 120  
TGCCTTGGGG CGTGAAGGG CATTAGGAGT GTTTCATTG ATATGTGAAT GCTCATAAAA 180  
AAATGTCAAG GAATGAAGAA CAGCANCTCT CAGTGGTGCC TGCATTIATA ATTATTTATG 240  
TGAAAGTCAA ATTCATGTAC AGTAAATTG TTATAAGAAT ATTCAAA 287

SEQ ID NO:3472

SEQUENCE LENGTH:287

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04082

SEQUENCE DESCRIPTION:

GATCCAAAGT GCAAGGNTTT GATTATAAAC ATAATTCCT AGACTGAAAG TTTTGGAAA 60  
AGATGCAGGG TCTGAGTCAG GCCTTCTGGT TATATTGTGC AGTTTCAAAA GAACTATTTA 120  
ANACTCTTGA AAACATCATG AAATAAAAAAT CATAGGGTGA AAATTGTATT TGTTAAAAATA 180  
CCTTAATAAT TTAATAATGAC CTGATTCCT GGAAAAATTT ATTATTCAAA AGGTGGAGGC 240  
ATTGTAAGAAA GGAAATAGTG ATGTAAATAA ACATGTTCTC TTTCAAA 287

SEQ ID NO:3473

SEQUENCE LENGTH:278

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04083

SEQUENCE DESCRIPTION:

GATCTGTTG TCACTGACAG ACTGTAGTAG TGTCTGTGTG CTGACTGATA GATAGACTAT 60  
AGTAAAAATTT GGGTGTGGCC TGACTAACGG TCTAGGGTCT GTAAGCTGAC AGTCTGCCTG 120  
CTTTCTGATT GTATCCATTG AAGTGTATGT ACATTATGGT AATNCTCTGT CTATTAATG 180  
TGTCTAACAA AGGAAGGAAT TAAGCACTCC ACATGTTTC TTTATAGGGG AGTTCTGTAC 240  
ACTATGATTT TAAATAGATA TTTCTTATAT AANGGAAA 278

SEQ ID NO:3474

SEQUENCE LENGTH:278

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04084

SEQUENCE DESCRIPTION:

GATCCCAACA CTGAAGGGGT AGAAGGCCAG GGGGGCATGG AGAGTGCAGC TCCATTATAG 60  
TGAAGAGCCA AACATATGTN AACTGTTTGC TGTGTGGAGG TGTTAGTTCT GTCGCCTACC 120  
ATCTTCATCT CTAGCACCTC CCCTGCCAAG AGTCAACCAC TAAGCAATCC CACCCAAGCC 180  
TGGATGCTTC TAGAGGGGCC CACTCCCAGC TGGGAGAGTN TAGGGGATAT GCTCACACCA 240  
CATTAGCAGC AACCAATAAA AATGCTGGAA ACAAGAAA 278

SEQ ID NO:3475

SEQUENCE LENGTH:277

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04086

SEQUENCE DESCRIPTION:

GATCTTAACT GTGTCATTTG AAACCCTGTG CGTTTGAAGT GGTGGAGACA GGACCTTTAT 60  
CATATTCTGA GCTTTAAATA TATAAACNGG TAAATCATTG CATTTAATAA GACATAGCCC 120  
AAGTCCCAGA ACGCGTTTTG AGAGTAACCA GAAACAGAGG TTATTTGTTT TGCTTTCTTT 180  
TATCACTGCT ATTGGATGGG ATATCCCAAA CAAGTGGATG TGGCGCCCAA TTCTATTTTC 240  
CACTATTCAA TGATTAAAT AATTACAAAA ACGCAAA 277

SEQ ID NO:3476

SEQUENCE LENGTH:273

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04087

SEQUENCE DESCRIPTION:

GATCTTTCCA AATACCCAAA TGTCCTGCA AGCCCGTTAA ATAATCCCT ATGCTACCT 60  
 TAATAACATA CAATGACCAC ATAGTGTGAG AACTTCCAAC AAGCCTCAAA GTCCCTTGAG 120  
 ACTCCCAAT ACCTAATAAG GCATGCGAAA TGTTCATG AACTACCCA CAACACGCCT 180  
 AAAACTCAAA ACACCCAAAA ATATNTCCTC CAATGTCCTG AAACATGAAC CCAAAAAGAG 240  
 ACCACAATA AACTCGTGAC TTGTCCNTC AAA 273

SEQ ID NO:3477

SEQUENCE LENGTH:272

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04088

SEQUENCE DESCRIPTION:

GATCCTCTCN ACCCTCCTCT AGCCATCCCT TGGGAAGGG TGGGAGAAN TATAGGATAG 60  
 AACTGGACA TGGCCATTG GAGCACNNGG GCCCACTGG ACAACACTGA TTCCTGGAGA 120  
 GGTGGCTGCN CCCCAGCTT CTNTCTCCT GTNACACT GGACCCCACT GGCTGAGAAT 180  
 CTGGGGTGA GNGGACAAG AAGGAGAGGA AAATNTTCC TTGTGCCTGC TCCTGTACTN 240  
 GTCCTCAGCT TGGGNTTCT TCCTCTCCA TN 272

SEQ ID NO:3478

SEQUENCE LENGTH:270

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04089

SEQUENCE DESCRIPTION:

GATCTTGATA TTNGGCCTCT TTGAAGAGAC AGCCCTGGCT GCTTCCTNN CCTACTGCCC 60  
 TGGAATGGGT GTTNCCTTA GGATGTATCC CCTCAAACCT ACCTGGTGGT TCTTTGCCTT 120  
 CCCCTACTCT CTTCTCATCT TCGTATATNA CGAAGCAGAA AACTCATCAT CAGGCGACGC 180  
 CCTGGCGGCT GGGTGGAGAG GGAACCTAC TATNAGCCCC CCGTCCTGCA CGCCGTGGAG 240  
 CATCAGGCCA CAACTCTGC ATCCGACACN 270

SEQ ID NO:3479

SEQUENCE LENGTH:267

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04090

SEQUENCE DESCRIPTION:

GATACCAAC AGGGAAGAC ATCCTGGTTC TTTTGATGTG GTGCATGTGA AGGATGCCAA 60  
 TGGCAACAGC TTGCCACGA GGCTTTCCAA CATTTTGTG ATTGGCAATG GCAATAAACC 120  
 TTGGATTTC CTGCCCAGGG GAAAGGCGAT TCGACTTACT GTTGCTGAAG AGAGAGATAA 180  
 GAGGCTGGCC ACCAAACAGA GCAGTGGCTA AATTGCAGTA GCAGCATATC TTTTTTCTT 240

TGCACAANTA AACAGTGAAT TCTCAAA

267

SEQ ID NO:3480

SEQUENCE LENGTH:263

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04091

SEQUENCE DESCRIPTION:

5 GATCCCTGGA GTGCCTTGGT GTTCAAGCC CCTGCAGGAA GCAGAATGCA NCTTNTGAGG 60  
 CACCTCCAGC TGCCCCCGGC CGGGGGATGC GAGGCTCGGA GCACCCTTGC CCGGCTGTGA 120  
 TTGCTGCCAG GCACTGTTCA TCTCAGCTTT TCTGTCCCTT TGCTCCCGGC AAGCGCTTCT 180  
 GCTGAAAGTT CATATCTGGA GCCTGATGTC TTAACGAATA AAGGTCCCAT GCTCCACCCG 240  
 15 AGGACAGTTC TTCGTGCCTG AAA 263

SEQ ID NO:3481

SEQUENCE LENGTH:257

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04092

SEQUENCE DESCRIPTION:

25 GATCGGGAAC AAATGNAATC TGTGGATGCA TCAAGCTATC GTCAGTCAAA CCCCTTTAAA 60  
 ATGTTGCTTT GGCTTTGTAA ATTTAAATAT GTAAGTGCTA TATAAGTCAG GAGCAGCTGT 120  
 CTTTTTAAAA TGCTCGGCT AGCTAGACCA CAGATATCTT CTAGACATAT TGAACACATT 180  
 TAAGATTGGA GGGATATAAG GGAAAATNAT ATGAATGTGT ATTTTACTC AAAATAAAAG 240  
 TAACTGTTTA CGTAAA 257

SEQ ID NO:3482

SEQUENCE LENGTH:255

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04093

SEQUENCE DESCRIPTION:

35 GATCTACATT TTGTACATAT TTATATAAAA TTTACCTTTA AGTATTTACT TTAaaaaatt 60  
 TAATGGCTTA ACTCGAACTT GAAGACACAT ACTTCAACTG TCCTTATTGT CCATTAAANT 120  
 40 GATAATTTN ATTTTCCTNG CTTTATAGA TTTNNCTATA TAGGAATCAA GATTANGAA 180  
 ATTTTGCAAT AAAANTAGTG TACCAATGCT TCATATACGT TAGTTATTTG CTATTATGTA 240  
 GGAAGAGGA TTGTN 255

SEQ ID NO:3483

SEQUENCE LENGTH:255

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04094

SEQUENCE DESCRIPTION:

45 GATCTGAAAT NAGAAATATC CAACATTGCA CGAGTATCTT TTTTTATNCC TCCACAGACT 60

CCGCCAGAGA CACCTAGTCC TGATGAAACG TCTGCTCCTT GTCCTAATAT TCATATCAAC 120  
 AGCACCATTTC CTGGCATTCA CATTTTAAAA ATTATGTGGA AGTGGATAGG AGAACTGCAG 180  
 CTGTCAATAG CCTAGGGCTG AATTTTGTGTC AGNTAANTAA NATAAATCAT TCATCCTTTT 240  
 TTTTNGNTTT ATAAA 255

SEQ ID NO:3484

SEQUENCE LENGTH:253

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04095

SEQUENCE DESCRIPTION:

GATCTAGGTG GTTTGTAATT GTGCATTACT GACTGCATAT GTTTGTGTAT GTGTAAATGT 60  
 GGGCTCCCTG TTAAGTGGGG CTCATGGATA CGAGGCCTGA GGAAGTGTGG CTTGCTAGTC 120  
 TGTTACGTTA ACATGCTTTT CTAAAATTGC TTCACGTGTT AATTCATTTA CTCCTGCATT 180  
 CATTGACTGT TTTTGTCTT TTCCATTAC TTTGTACTTA TTTTTCAT TAAATTTG 240  
 ATTTATTTTG AAA 253

SEQ ID NO:3485

SEQUENCE LENGTH:251

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04096

SEQUENCE DESCRIPTION:

GATCCTAGTT CCTTCCTCC CGAGTGATAC CCATGAACTG CCAGTAGAGG CTGCTATCGT 60  
 TCCATGTGTA AGGAATGAAC TGGTTCAAGG CGCGTCCTAC CCAGTCATT TCTTTACCTT 120  
 ATACTAATTC TTCCTGAATA ATGTCTTCAG TTTCTTGAGG AGACTCCTAG TTTTGGTTTT 180  
 CAAATTACTT GGAGGGCTGC CTAGGAATCT ATCTCCCTCT GAAATAAAGT TTCCTCATCT 240  
 TCCACNNTAA A 251

SEQ ID NO:3486

SEQUENCE LENGTH:249

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04097

SEQUENCE DESCRIPTION:

GATCATACGG CCTTCCAGGA GACGCTGGGA TGTAAGATAC TCTTGGAGGN TGGCTCTGAA 60  
 CTCGGGTGTC TGAATCACAG GGCAAGGGTA GGCCTGGGCT GTGGCTAACA GCAGAGTCAC 120  
 TTCCCTGGCC TAGCTTGGGG ACCTGGGGAG GAGGAGGTAG CTCTGGACAC CAGGGTTCTT 180  
 CCCATTGTGG GAGAGTNAGT TTTTtagggg GAGACCTGTC CCCAGATTA AAGAACTGGG 240  
 AGCCCTAAA 249

SEQ ID NO:3487

SEQUENCE LENGTH:248

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04098

SEQUENCE DESCRIPTION:

5 GATCAAAGAA GAGAGTAAAG CTATGTCTTC AATTTAATTT CAATACCTGA TTTGTACTTT 60  
CCTTGAAAGC TTTACTTTAA AATACCTTAC TTATAGGCCT GGTGTCATGC TATAAGTATG 120  
TACATACAGT TTCACCTTCAA AAATAAAAAA AAANTCCCTA AAANCTCTCT ATACTCTCTA 180  
TAACANTNCT TTATCANGAN CTCTGGNCAA TGGTATTATT TNGGANANTC ATGGTGATGT 240  
ATTNTNN 248

SEQ ID NO:3488

SEQUENCE LENGTH:245

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04099

SEQUENCE DESCRIPTION:

10 GATCTGTGTT GTAGAACATG AGGGTGTAAG CCTTCAGCCT GGCAAGTTAC ATGTAGAAAAG 60  
CCCACACTTG TGAAGGTTTT GTTTTACAAA TCACTTGATT TAACACACTC AGGTAGAATA 120  
20 TTTTAATTTT TACTGTTTTA TACCCAGAAG TTATTCTAC ATTGTNCTAC AGCAAGAATA 180  
TTCATAAAG TATCCCTTTC AAATGCCTTT GAGAAGANTA GANGAAAAAA AGTTTGATA 240  
TATTN 245

SEQ ID NO:3489

SEQUENCE LENGTH:246

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04100

SEQUENCE DESCRIPTION:

30 GATCCTGATN ATATTGGCA GCTGTCCTCC AGTCTTAAAA GTTTGATGA CAAATACACC 60  
TTGAAGCTGA CCTTCATCAG TGGGAGAACA AAGCAGCAGC GGAAGCCGA GTTCACAAAG 120  
TCCATTGCTA AGTTTTTTTG ACCACAGTGG GACACTGGTC ATGGATGCAT ATGNGCCTGA 180  
35 AATATCCAGG CTCCATGACA GTCTTGCCAT AGAAAGANAA ATAAAGTAGC CACTTCTANA 240  
AGTAAA 246

SEQ ID NO:3490

SEQUENCE LENGTH:239

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04101

SEQUENCE DESCRIPTION:

45 GATCCTGGGT ACTGAAAGNC TTAGGGAAGC TGGCCTGAGA GGGGAAGCGG CCCTAAGGGA 60  
GTATCTAAGA ACAAAGCGA CCCATTGAGA GACTGTCCCT GAAACCTAGT ACTGCCCCC 120  
ATGAGGAAGG AACAGCAATG GTGTCAGTAT CCAGGCTTTG TACAGAGTGC TTTTCTGTTT 180  
AGTTTTTACT TTTTTGTTT TGTTTTTTA AAGATGAAAT AAAGACCCAG GGGGAGAAA 239

SEQ ID NO:3491

SEQUENCE LENGTH:239

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04102

SEQUENCE DESCRIPTION:

GATCTGGGGA AAGGAGAGAC CATGGTGTGA ATGTAGAGAT GCCACCTANC TCTCTCTAAG 60  
GCAGGCCTGT GGATGAAGGA GGAGGGTCAG GGCTGGCCTT CCTCTGTNCA TCANTCTGCT 120  
AGGTTGGGGG CCCCGNCCN NCCATACCTA CGCCTAGGGA GCCCGTCCTC CAGTATTCCG 180  
TCTGTAGCAG GAGCTAGGGC TGCTGCCTCA GCTCCAAGAC AAGAATGAAC CTGGCTGTN 239

SEQ ID NO:3492

SEQUENCE LENGTH:244

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04103

SEQUENCE DESCRIPTION:

GATCTGTGTT TCCTCCCCAG TCATCTTTCT TGTTCAGAG AGGTGGGGCT GGATGTCTCC 60  
ATCTCTGTCT CAACTTTATG TGCACGAGC TGCAACTTCT TACTTCCCTA CTGAAAAATA 120  
GAATCTGAAT ATAAATTTGT TTTCTCAAAT ATTTGCTATG AGAGGTTGAT GGATTAATTA 180  
AATAAGTCAA TTCCTGGAAT TTGAAAGAGC AAATAAGAC CTGAGAACCT TCCAGAATCT 240  
GAAA 244

SEQ ID NO:3493

SEQUENCE LENGTH:235

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04104

SEQUENCE DESCRIPTION:

GATCCATAAA AGATTGTATT TTTATTACTA TTTAAACAAG TGATTAAATT TAGTCTGCAC 60  
ANNAGCAAG GGTTCACATG CATTCTTTA TACTGCTGGA TTTTGTGTG CATCATTTAA 120  
AACATTTGT ATGTTTCTNC TTATCTGTGT ATACAGTATG TTCTTGAATG ATGTTTCATT 180  
GTCAGGAGNN CTGTGAGAAA TAAACTATGT GGATACTGTC TGTTTATATT ATAAA 235

SEQ ID NO:3494

SEQUENCE LENGTH:233

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04105

SEQUENCE DESCRIPTION:

GATCGACTGT AAATAGAGGA CTTCTGGAAC ATTCCAAATA TTCTGGGGTT GAGGGAAATT 60  
GCTGCTGTCT AAAAAATGCC AAGGTTGGAC AGGCGCTGTG GCTCACGCCT GTAATCCCAG 120  
CACTTTGGGA GNCTGAGGTA GGAGGATTGA TTGAGGCCAA GAGTTAAAGA CCAGCCTGGT 180  
CAATATAGCA AGACCACGTC TCTAAATAAA AATTANTAGG CCGGCCAGGC AAA 233

SEQ ID NO:3495

SEQUENCE LENGTH:243

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04106

SEQUENCE DESCRIPTION:

GATCATGGAG ACCTGGCTGG TAGCTGTAAC AGAGATGGTG GAGTCCAAGG AAACAGCCTG 60  
TCTCTGGTGA ATGGNACTTT CTTTGGTGA CACTTGGCAC CAGCTCTGAG AGCCCTTCCC 120  
CTGTGTCTG CCACCATGTG GGTCAATGT ACTCTCTGTC ACATGAGGAG AGTGCTAGTT 180  
CATGTGTNCT CCATTCTTGT GAGCATCCTA ATNNNTCNNT TCCATTTTNA TGACAGGANG 240  
AAA 243

SEQ ID NO:3496

SEQUENCE LENGTH:231

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04107

SEQUENCE DESCRIPTION:

GATCCAGAAC TGAGGTCAC TGGTTCTAGA ACNGNNACAT TTACCTCGAG GCTCTTCCAT 60  
CCCCAACTG TGCCCTGCCT TCAGCTTTGG TGAAAGGGAG GGCCCTCAT GTGTGCTGTG 120  
CTGTGTCTGC ACCGCTTGGT TTGAGTTGA GAGGGGAGGG CAGGAGGGGT GTGATTGGAG 180  
TGTGTCCGA GATGAGATGA AAAAAATACA TCTATATTTA AGAATCCCAA A 231

SEQ ID NO:3497

SEQUENCE LENGTH:231

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04108

SEQUENCE DESCRIPTION:

GATCTGCAGC CAGGCCTTTC TGAAGNGTT ATTCTGNTAA AAATGGTCTN AGTTNTCTGA 60  
AAAGCCAGCT CTTGAACCTC TTCACAACAG TATCAACACT GGCTTCTCCC GGTTCATNTT 120  
ATGCGTGCCA GAAGTCAGTG GTAACNTCTG CAGGGCTTAA TACATTAGTG GTAACGGTT 180  
TAAAAACAA AGACTGTAAG CCTGTGTGTG CCACTGNNNG CTTCAACNGN N 231

SEQ ID NO:3498

SEQUENCE LENGTH:224

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04109

SEQUENCE DESCRIPTION:

GATCCCAGTT TGCAGCAAAC CCCACACCCC AGCTCACACA GCAAAAACAA TGGACAGGCC 60  
CAGAGGGTGA AGCAAACAGT GTCCCTTCTG GCTGTNTTGG AGCCTCCCA GTAACCACCT 120  
ATTTATTTNA CCTCTTCCC AACCTGGAG CATTATGCC TAGGCTTGTN AAGAATCTNT 180  
TCAGTCCCTC TCCTTCTCAA TAAAAGCATC TTCAAGCTTG TAAA 224

SEQ ID NO:3499

SEQUENCE LENGTH:294



SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04110

SEQUENCE DESCRIPTION:

GATCGGGAAC AAGCACGTTG TACCCCTGGC TGGACATGGC CAAGACACAA GGCATTCCAC 60  
 GGC GGCAAGC TGACCGCACA GCAGTCTGGC TTGATTTTCA GCCGTCATCA TTGGGTTCTG 120  
 TTTTGACAGC TCTGCTGCCC ATAGGGACTG CGACTGGGNC CAGGTCAACC ACGCCAGGGG 180  
 GGTGTCACCA GCCTTTTCTT TTTTNCCTTC TTTTNTTTT TTCCCCCTA AAGTTGTNNN 240  
 AAAGCNAANC CNTGGGAATA ATGGTTTNTT TGGANTNAAA CCCANNATTT CAGN 294

SEQ ID NO:3500

SEQUENCE LENGTH:221

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04111

SEQUENCE DESCRIPTION:

GATCCAAGTT TGATAACATT GGCATGAATG CCATGGCTAA CAAAGATAAT GCAAGTNTCA 60  
 AACAGCTTAG ATGGGAGGCT GAACGTGATG ACTGGCTACA CAACAGAGAT GCAAAAANGTA 120  
 TCATCAGGAA AAGGAAACAT TTTAAAANGA AGAGGNTTAA AACCCTCAA AAANCTAAAA 180  
 NCCAAGGGAA ATGAGTTATT ANTGTAANTN ATAGNTTAAN N 221

SEQ ID NO:3501

SEQUENCE LENGTH:220

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04112

SEQUENCE DESCRIPTION:

GATCTAATTG TATTAGTATT GTGAATAATC ATGTGAAATG TTTTGAGACA GAGTACTATA 60  
 TTTGTGAATA TAATNNTATG GTTTTTTCA CITAGAACCT TTCTGTGTGG AAAACTAAGA 120  
 AAATTGCTTT CTGCTGTATA ATCTGGCATT CATTGTAGAT TAAAGCTTAT TTTNCTGTGA 180  
 ATAAAACGNN NNCAATAAAA TACTATTCTT TAAAATTAAA 220

SEQ ID NO:3502

SEQUENCE LENGTH:226

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04113

SEQUENCE DESCRIPTION:

GATCTGGACA CCTGTCTCC TGAGGAGCGC CGGGCCAGGC TGCGGAAGTN TGAGGCTCAG 60  
 CTCCAGTCGA GGAAGGAGTA CGAGCAGGAG CTCAGTGATG ACTTGCATGT GGAGCGCTAC 120  
 CGACAGTTCT GGACCAGGAC CAAGAAGTGA CCGTGGCTCC AGCCACCCCG GGACATTGCT 180  
 AAGATGGGAG GGCTGTTCTT AAATNACTCG TTCTTGAAGC TGCAAA 226

SEQ ID NO:3503

SEQUENCE LENGTH:215

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04114

5 SEQUENCE DESCRIPTION:

GATCATGCCG AAAAAGTGGC GGAAAAGCTA GAAGCTCTCT CGGTGAAGAN GANNCCAAGG 60  
AGGATGCTGA GGAGAAGCAA TAAATCGTCT TATTTNATTT NCTTTTCCTC TCITTCCTTT 120  
CCTTTTTTNA AAAAATTTTA CCCTGCCCTT CTTTTTCGGT TTGTTTTTAT TCITTCATTT 180  
10 TTACAAGGGA CGTTATATAA AGAACTGAAC TCAAA 215

SEQ ID NO:3504

SEQUENCE LENGTH:213

SEQUENCE TYPE:nucleic acid

15 TOPOLOGY:linear

CLONE:HUMGS04115

SEQUENCE DESCRIPTION:

GATCTNTTCT TAATGTACAT AGTGCTAACA TGAAGACCTT TTTNTGCACT ATATGCAAAC 60  
20 AGGGTAACATA ACTAAACAAA AGCCACTTTC AATCTTCAAT CCTTGAAGGT ATATCTAGGT 120  
TTATNACAGT AATTGNTTNT ACATTNATG GTGCCTAGTA TTGACAAAAT GTTATTTCCC 180  
TACATTAAAC ATGACTCCAT AGACCTTTTC AAA 213

SEQ ID NO:3505

25 SEQUENCE LENGTH:212

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04116

30 SEQUENCE DESCRIPTION:

GATCTAATGT AAAATCCAGA ACTTGGACTC CATCGTTAAA ATTATTTATG TGTAACATTG 60  
AAATGTGTGC ATTAATATG CTCCACAGT AAAATCTGAA AACTGATTT GTGATTGAAA 120  
GCTGCCTTTC TATTTACTTG AGTCTGTAC ATACATACTT TTTTATGAGC TATGAAATAA 180  
35 AACATTTNAA NCTGAATTNN TTAACNTGA AA 212

SEQ ID NO:3506

SEQUENCE LENGTH:211

SEQUENCE TYPE:nucleic acid

40 TOPOLOGY:linear

CLONE:HUMGS04117

SEQUENCE DESCRIPTION:

GATCAGAGAT GCTGTTTCATC AGTCCAACA AGATGGCCTA GAAATCGCAT TCTCACCTCG 60  
45 CCTTGCTGCT GCTTTAATTC CAAGTTCTAT TTCTCCCTT ATAGTTTCT ATGGGAATGA 120  
GGCGGATACA GGAAACACCC TATCTCCTCT GTATTTTGT AGTGGAAATT CTATTTAAGG 180  
GGCTCATTA AGCATAGTAT TTATACACAA A 211

SEQ ID NO:3507

50 SEQUENCE LENGTH:209

SEQUENCE TYPE:nucleic acid

55

TOPOLOGY:linear

CLONE:HUMGS04118

SEQUENCE DESCRIPTION:

5 GATCGAGATN CAAAGCCACA TNCTCTCTCA CCAAGNTAAA CTATTANAT TAATTGTTAG 60  
CGGTGTATG CTGCTTTCTT CTTTGACAAG GCCATGACTA AGAAGGCTCT AAGTAAAGGA 120  
AGAATCATTT ATTCCATAGT CAGCTAACTG GTAGCAAAGC CTTCTNTTCC AAGACACCAA 180  
GGGAGAGGGG AGGACATAAA TTATGCAAA 209

10 SEQ ID NO:3508

SEQUENCE LENGTH:208

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

15 CLONE:HUMGS04119

SEQUENCE DESCRIPTION:

20 GATCCCTCT TNAGTCNCT GCCCTTCCA AGGACACTAA TGAGCCTGGG AGGGTGGCAG 60  
GGAGGAGGGG ACAGCTTCAC CCTGGGAAGT CCTGGGGTTT TTCCTCTTNC GCCCTTGTG 120  
GTTTCTGTTT TGTAAITTA GAAGAGCTAT TCATCACTGT AATTATTATT ATTTTCTACA 180  
ATAAATGGGA CCTGTGCACA GGAGGAAA 208

25 SEQ ID NO:3509

SEQUENCE LENGTH:322

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04120

SEQUENCE DESCRIPTION:

30 GATCCAAGCA TATAAAAAGC CTNTATATTT TTNAAAAACA CATCTTAAC CCACGCTTTA 60  
CGATATTATA AAAGTTGAAT GGTTCCTCTT GGTAAAGGATA TTGCTTACA AGTGCTAGGA 120  
AATAACTNNC TGATAGCTGC GTTAACATAC TTNGTTTTGC CTAGAGAGGG GCAATAAAAA 180  
TGAACCAAAG GATATTTCCA GAAAGGATTA AGAAAGCTGT TTAAGANGGC CATGACTCTT 240  
35 TAGGTGTGTA TGTGTACCTT TCAGCATCCT AGGAATTTTN ATACTAAAAG CAAAATGTTT 300  
TTCCAGTTA GTCTTCTTCA GN 322

40 SEQ ID NO:3510

SEQUENCE LENGTH:205

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04121

SEQUENCE DESCRIPTION:

45 GATCCGNCCA CTNGGCCTC CCAAAGTGCT GGGATTACAG GTGTGAGCCA CCGTGCCCGG 60  
CCTCTTTTAA TTTATNCCTA AAATATTACC TTGAGGCCAA ATNCTGCGCT TAAGGAGAAT 120  
GTGCACCAAG TGCTGGGGTG GGGGCTGGTT ATAAACGAGG CCACAAATNA TGCTTGTAAG 180  
TAAATTGTGT GGTCAAATC TGAAA 205

50 SEQ ID NO:3511

SEQUENCE LENGTH:205

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04122

SEQUENCE DESCRIPTION:

GATCCCTCAC TTTATTTATA TTCCCACTAT AACCAGTAAG TTCATTTCAT AGGCCCTATC 60  
ATGCATTAAT CATTGNATGN NAGNAGTTAA TGAAAACTTT TCCTGTTACA ACGCCCATTG 120  
CCGGCAATGA ACGTACCAAA ACCGCCAAGG AAGTCATTGT TATTGCACAA TACATGAGGA 180  
CCTGGAGCTT TTCCAAAAGC TTAAG 205

SEQ ID NO:3512

SEQUENCE LENGTH:204

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04123

SEQUENCE DESCRIPTION:

GATCTAAAAC GGCTATTTAA TATGTTACAA GGCACCTGAG TATGGTTGCA TGTCCAAATA 60  
TAAATGTTTT TAAATTAAC TAAACATTTG GTTATAAAG TTTANCCATA ATAATAGAAT 120  
TTTTAAACA CGNTTGTNTG GTTTAATCTT AGCATATTTT TCCAACATAA AAAGCTCAGT 180  
ATTGCTCTGN GTTCTCAGNG GAAA 204

SEQ ID NO:3513

SEQUENCE LENGTH:201

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04125

SEQUENCE DESCRIPTION:

GATCTCTCTC ATTCATTTCA ATGTATTTT ACTTTAAGAT GAACCAAAAT TATTAGACTT 60  
ATTTAAGATG TACAGGCATC AGAAAAAGA AGCACATAAT GCTTTTGGTG CGATGGCACT 120  
CACTGTGAAC ATGTGTACCC ACATATTANT ATGCAATATT GTTCCAATC CTTNCTAATA 180  
CAGTTTTTTA TAATGTTGAA A 201

SEQ ID NO:3514

SEQUENCE LENGTH:200

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04126

SEQUENCE DESCRIPTION:

GATCCAATTT ACATCCACAT TTTAGGTNCA ACAGCAAGAA GTTCAGAGAG AGATTTCCTCA 60  
ACCAGACATT GGGTCACTCA CTGGTCACCT TGCCAGTNCA TTTTATTAGA AGGGAATCTG 120  
TTGTAGCAAA TGGAATAAA CCTGGGTTTC TATAGACCCA GAACTGAAAA AATAAACATC 180  
GTGCTGTTTT TAATTNGAAA 200

SEQ ID NO:3515

SEQUENCE LENGTH:209

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04127

SEQUENCE DESCRIPTION:

5 GATCTTAGTT TTCITTTGTT TATTCCCGAG CTCATTTTTT TCTTCTGGTC AGTTTTTTTA 60  
 AGGGGGGGTG TTGTGGTTTT TTGTTTTTGT TTGCTTCTG AGAAAGCATT TGCCTTTCTT 120  
 CCTCTCCCAA CATAACAATC GTGGTAACAG AATGCGACTG CTNGATTAC CGATGTATTT 180  
 AATGTAAGTA AAAAAAGGAA AAAAAAGAA 209

10

SEQ ID NO:3516

SEQUENCE LENGTH:198

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

15

CLONE:HUMGS04128

SEQUENCE DESCRIPTION:

20 GATCCATTCC CTGCAACTNA AGATTCTAAG GAACTGGGTT TCTCAGTATA CAATGGGAAT 60  
 GGTGAGGAG AGGTAAAGAG TAGAAGACAG TATCAAGANT CCAGAGCCCA GCACCTGTAG 120  
 TCCTAACTAT NCANATTCCT TGAGCCCAGG AGTTTGAGTC CAGCCTGGAC AACATATTGA 180  
 GACCCCATC TCTCTAAA 198

SEQ ID NO:3517

SEQUENCE LENGTH:191

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

25

CLONE:HUMGS04129

SEQUENCE DESCRIPTION:

30 GATCATGAAT AGGAGCCCAT GCTAGAAGTA CATTCTCTCA GATTGAAAC AGTGAAATAT 60  
 GATGTATTTC TGAGCTAAAA CTAACTATA GAAGACATTA AAAGAAATCG TATTCTTGCC 120  
 AAGTAACCAC CACTTCTGCC TTAGATAATA TGATTATAAG GNAATCAAAT AAATGTTGCC 180  
 TTAACCTCAA A 191

35

SEQ ID NO:3518

SEQUENCE LENGTH:191

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

40

CLONE:HUMGS04130

SEQUENCE DESCRIPTION:

45 GATCCAGGCA GCCAAGAACT TGATGAATGC TGTGGTGCAG ACAGTGAAGN CATCCTACGT 60  
 CGCCTCTACC AAATACAAA AGTCACAGGG TATGGNTTCC CTCAACCTTC CTGCTGTGTC 120  
 ATGGAAGATG AAGGCACCAG NGNNAAGCC ATTGGTGAAG AGAGAGAAAC AGGATGAGAC 180  
 ACAGACCAAG N 191

SEQ ID NO:3519

SEQUENCE LENGTH:187

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

50

55

CLONE:HUMGS04131

SEQUENCE DESCRIPTION:

5 GATCTCCCC AAAGATTCCA GCGGGTGCAA CCCTGCNTGT TCGAGGTGGA GCTGCTCAA 60  
 ATAGAGCGAC GAACTGAGCT GTAACCAGAC TGGGGAGGGG CAGGGGGAGA GGCCCCCATC 120  
 AGGGACCAGA CTGTTCAGA AAAAAACAA AAAACANAAA CAAACAAAA AACACTTAAA 180  
 AGCCAAA 187

SEQ ID NO:3520

10

SEQUENCE LENGTH:184

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04132

15

SEQUENCE DESCRIPTION:

20 GATCGAGACT CTNCCAGAAA ACAAACAAA ACAAAAAAAA ATCCGTTTCT AAGGACGGCG 60  
 GGGATTCCGT TCGAGCCCGT GGCTGCTCTG TTTTGTGTTG CTTTCTTGGT ATATAATCCT 120  
 ANAAATAAAA GGGTAATATA AATATTTNAG AAGAGGGAAA TTGCTGAAGA GTAGTAAGGG 180  
 CAAA 184

SEQ ID NO:3521

25

SEQUENCE LENGTH:177

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04133

SEQUENCE DESCRIPTION:

30 GATCAGATGA CCATTGAGGA CTTGAATGAA GCTTTCCAG AAACCAAATT AGACAAGAAA 60  
 AAGTATCCCT ATTGGCCTCA CCAACCAATT GAGAATTTAT AAAATTGAGT CCAGGAGGAA 120  
 GCTCTGGCCC TTGTATTACA CATTCTGGAC ATTAAAAATA ATAATTATAC AGTTAAA 177

SEQ ID NO:3522

35

SEQUENCE LENGTH:220

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04134

SEQUENCE DESCRIPTION:

40 GATCCCATCC GAAGCTCAGG GTATGGAGAG CGGGGAGCTC CNCCAAAGAT TCCAGGCGGT 60  
 GCANCCTGGT GTTCGAGGTG GAGCTGCTCA AAATAGAGCG ACGAACTGAG CTGTAACCAG 120  
 ACTGGGGAGG GGCAGGGGGA GAGGCCCCCA TCAGGGACCA GACTGTTCCA AAAAAAANC 180  
 AAAAAACAAA ANCAAACAAA AAAACACTTA AAAGCCCAAA 220

45

SEQ ID NO:3523

SEQUENCE LENGTH:172

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04135

50

SEQUENCE DESCRIPTION:

55

GATCCTACCT AAGGGGCACA ACTAGTAAGG GAGTAGAGCT GAGATTGGCT CCAGAGTTCT 60  
 TGTTTTTCAGC CACCATTTTA TGCTGCCTCT CCAGTNATTT TTTTCCCAT TTTCTTCAGT 120  
 NTTTCTATAG CAGAGATTG ATAATAAAAA GAAAATCCTA AACAATGAGA AA 172

SEQ ID NO:3524

SEQUENCE LENGTH:169

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04136

SEQUENCE DESCRIPTION:

GATCGCACTG CGCAGGGGTG CCACGGAGCT CACCCACGAG GACTACATGG AAGGCATCCT 60  
 GGAGGTGCAG GCCAAGAAGA AAGCCAACT ACAATACTAC GCCTAGGGCA CACAGGCCAG 120  
 CCCAGTNTC ACGGCTGAAG TCGCAATAA AAGATGGTTT AGGGTCAAA 169

SEQ ID NO:3525

SEQUENCE LENGTH:169

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04137

SEQUENCE DESCRIPTION:

GATCTCAGGC ATCGGATTAT TTCTCCTGTA AATATTTTCTAG AATGTATCTN TCCAAGATGA 60  
 GAGCTCATTAA AAGACAATT ACAAAGCTTA TCACATCCAA AAGANTTATC AATAATTTTN 120  
 AAATATTATT AANCGTGTA TAAATNTNCA AAGTNCCACT TGCCTTAAA 169

SEQ ID NO:3526

SEQUENCE LENGTH:165

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04139

SEQUENCE DESCRIPTION:

GATCAAAANG AGTNAANCTA TCCAAAAAAA ATTTGTATAT TTGGGAAAAA TGGATTTTTTA 60  
 CATAGCTTTT GTATGCAGAT ATAAACTGT AATTATGAAT ATAGTGGGCG TAGATAAACT 120  
 CATAAGCTTA AATTCTAAAA ANGAAAAAGC TTATACCANG ATAAA 165

SEQ ID NO:3527

SEQUENCE LENGTH:165

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04140

SEQUENCE DESCRIPTION:

GATCAGCCGA TGACAGAGAT TGTAAGCCGT GTGTGGAAGC GAAAGTTGGA GCCGCCACGT 60  
 GCGGGCNCCTG GTGCTTNANC TGTGCTGTAA CGACGAGAGC GGCGAGGATG TCGAGNTTCC 120  
 CTATGTCCGA NACACCATCC GCTGACCCCG INTGNTCCTN TAGGN 165

SEQ ID NO:3528

SEQUENCE LENGTH:165

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04141

SEQUENCE DESCRIPTION:

GATCCATTG AAAGTNATTT TGACATAAGG AGTAAGGTTA CTACTGATTC CTACTCAGGA 60

GGCTAAANTG GGAGGACCAC TTAAGTATGG NAGGTCGAGG CTATAGTGAG CCATTACTGA 120

GCCACTGCAC TACAATCTGG GCGACANAGC AAGACTCTGT CTAAG 165

SEQ ID NO:3529

SEQUENCE LENGTH:161

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04142

SEQUENCE DESCRIPTION:

GATCCTGTGT TTGCAACTGG GGAGACAGAA ACTGTGGTTG ATAGCCAGTC ACTGCCTTAA 60

GAACATTTGA TGCAAGATGG CCAGCACTGA ACTTTTGAGA TATGACGGTG TACTTACTGC 120

CTTGTAGCAA AATAAAGATG TGCCCTTATT TTACCTACAA A 161

SEQ ID NO:3530

SEQUENCE LENGTH:161

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04143

SEQUENCE DESCRIPTION:

GATCAGTCAT CCACCAGGAA CGAAGATTTC CTGAAGAAGA CCTGGTCCCT CTGGAGGTTG 60

CGGTGGCTGA AGGATGCATC ATGTGCTCCT ACCCTGCTCT ACCGCTTTNT TGGGTCACAG 120

AGGCCAAATG TGAGAGCATT GAATAAATAT CTTAAGCTAA A 161

SEQ ID NO:3531

SEQUENCE LENGTH:159

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04144

SEQUENCE DESCRIPTION:

GATCTCGTGA AGCCCGCAAG GACCGAACAC CCCACCCCG ATTTAGACCT GCGGGTGCTG 60

CCCACGTCC CCCACCAAAG CCCATGTAAG GAGCTGAGTT CTTAAAGACT GAAGACAGGC 120

TATTCTCTGG AGAAAAATAA AATGGAAATT GTACTTAA 159

SEQ ID NO:3532

SEQUENCE LENGTH:386

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04145

SEQUENCE DESCRIPTION:



GATCCTTACA GTAGAGGTGA CCCCTGTAAT ACCATCTGCT GCCGTGAGGA CCTGAACTCA 60  
 CCTAACCCAA GTCCTGGAGG TTNNNNGAC ACAAAGGTGG CAGATATCTA CCTAGCATCT 120  
 CAGTACACAT CCTATGCCAT AAGTGGTCCC ACAGTACAAG GTGGCCTCCC TGTTCCTCGC 180  
 TGGGACCGTT TCAACAAAAC TCTACATCAG GGCATGCCAG AGGTCTACAA CTTTGATTTT 240  
 ATTACCATGA AACCAATTTT GAAACTTGAT ATAAAATGNA GGAGGGAGAT GACGGACTAG 300  
 AAGACTGTAA ATAAGATACC AAAGGCACTA TTTTAGCTAT GTTTTCCCA TCAGAATTAT 360  
 GCAATAAATT TTTAATTTT GTCAAA 386

SEQ ID NO:3533  
 SEQUENCE LENGTH:391  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear

CLONE:HUMGS04146

SEQUENCE DESCRIPTION:

GATCAGATTA AACCATTGAA GTTGGAAAGTT CATNAGGCTA AGCCTGTNCC AGAAAATCAC 60  
 CCACAGTGGG ATACAGCAAT AGAGGGGGAT GAAGACCAGG AGGACAGTGA GGGCTTTGAA 120  
 GATAGCTTTN AGGAAGAAGA GGAGGAAGAA GAAGATGATG ACTAAGCAGT ACTCTGAATG 180  
 GNCCACAGTG TTTGCACATA TTNCAATTT TTTNCTGTTT TGGAAAGTGA TCATAAACCA 240  
 GAAACAGTAC AGAACTGATG TTGNGGGNGG TGTNGTTTTT TTAAGCTAGA NATGGGTGCA 300  
 TAATATNACT AGGCAGTGGC GGTGCCTTGG TNCANCCTGN AAAATGTTAA GGCTTTNTTG 360  
 AAACCTTTCC AGTNGGGGNT GGTCCNTTNA N 391

SEQ ID NO:3534  
 SEQUENCE LENGTH:157  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear

CLONE:HUMGS04147

SEQUENCE DESCRIPTION:

GATCCGCCCC ACTCGGCCCT CCAAAATGCT GGGATTACAG GCGTGAGCAT TCAAGTCTGG 60  
 CGAGAGAGAT TGTTCCTAGA TGAGGGTGGG GCGGGGTGTC CTTAGCCCAA AGCTTGTGCC 120  
 AGTCTCTATC GGAAATAAAT GCCCCCAAAA CCTCAAA 157

SEQ ID NO:3535  
 SEQUENCE LENGTH:154  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear

CLONE:HUMGS04148

SEQUENCE DESCRIPTION:

GATCTACAGC AAAACACAGC GGGAGAGGTT CGCCTGGGCT CTCGCCATGG CAGGAGAAGA 60  
 CTTTGAATTC TAACGACGAG CCGTGTGTA ACTTCTTTTG TATGTGTGTG TGTTCCTTTC 120  
 ACTATTAAG CAGTACTGGG GAATTTTGT CAAA 154

SEQ ID NO:3536  
 SEQUENCE LENGTH:151  
 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04149

SEQUENCE DESCRIPTION:

5 GATCTAGGCA ATGATTAGA GGAAACCTCN TCACAAAAAC CCCAGAGGAA GAATATGACC 60  
 TGTGTTTCAA ATTTTGCCTT TCTGAAGTAT TTAATAATTAT GTGTATGTTT TTGCTTTGTA 120  
 TTTTAAAAGT AAAGCTGCTG TCCTCAAGAA A 151

10 SEQ ID NO:3537

SEQUENCE LENGTH:355

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04150

15 SEQUENCE DESCRIPTION:

20 GATCTATGAA AGCGGGGAGA GGGAACTGA ATATTAATTA TGAGCACAAA TTTGAAGGAA 60  
 AGAAAACAAA GAACCATTA CTAATCAAGC TTTGAAAGTC CTGCATGTTT GCCTTTATT 120  
 TTAGTGTTGA CGCCAACATA GACTGTCTAA GGTATTTTTT TCCCCAAACA CTTGAATCTT 180  
 GGTGCTTGGT ATGTAATCCA CTCTCTAGAG TCCAGTGTAC TTTAGACTTC ATCTGAGTCC 240  
 AATATATGTA CCACACTACT GTTTTATTAA TGTAAAAACC TTGTAAATGA ATTCAGATG 300  
 GGTGATTAA GTGAGTCACA AGTCACAAAA CTTTGCTATT CATAGTTTAT CTNGN 355

25 SEQ ID NO:3538

SEQUENCE LENGTH:148

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04151

30 SEQUENCE DESCRIPTION:

GATCTCTGCT TCCTGTACCT TGACATGCAA AAGGCTCTCC TAATACTCCA CATTCAAAC 60  
 GAAGAGGAAA ATTGAAATCT CTAATGAAGC TGCTGTGTGT ATTTATGANT ATTAATGAAT 120  
 AAAAAGTCTG TGGATGGTTT ACCTTAAA 148

35 SEQ ID NO:3539

SEQUENCE LENGTH:148

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

40 CLONE:HUMGS04152

SEQUENCE DESCRIPTION:

45 GATCAACAAC TNGTACTCT CGGGAAGACT CCTCTACTCA CAGCTGAAGA AAATGAGCAC 60  
 ACCCTTCACA CTGTTATTAC CTATCCTGAA GATGTGATAC ACTGAATGGA AATAANTAGA 120  
 TGTAATAAAA ATTNAGTTCT CATTAAAA 148

50 SEQ ID NO:3540

SEQUENCE LENGTH:147

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04153

## SEQUENCE DESCRIPTION:

GATCAGAGTA AACAAAAGGA ATCTCAAAGG AAATTGAAG AAGAACTGT AAAATCCAAA 60  
 GTGACTGTTG ATACTGGAGT AATTCCTGCC TCTGAAGAGA AAGCAGAGAC TCCCACAGCT 120  
 GCAGAAGATG ACAATGAAGG AGACAAA 147

SEQ ID NO:3541

SEQUENCE LENGTH:146

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04154

## SEQUENCE DESCRIPTION:

GATCGTGGCG CATGGCTTGG GGATTAACT ACCCTTGANG AGGACCCTTG TCCCAAACCC 60  
 TTCTTGTCT CTCTCCAAA AGTAGCTCC TCCAACCCGC AGCCTCTCTG CACACTAATA 120  
 AAACATGTGG CTTGAAAGG TTCAA 146

SEQ ID NO:3542

SEQUENCE LENGTH:144

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04155

## SEQUENCE DESCRIPTION:

GATCTTTAAG GACAAGTTA TCCAGCATCC AAAAACTTT GGACTAATTG CATCATACTT 60  
 GGAGAGGAAG AGTGTTCCTG ATTGTTTTT GTATTACTAT TTAACCAAGA AAAATNAGAA 120  
 TTATAAGCC CTCGTCAGAA GGGN 144

SEQ ID NO:3543

SEQUENCE LENGTH:140

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04156

## SEQUENCE DESCRIPTION:

GATCTGGGTT TTNATATCTT TATCTTCATT CAGTGAAGCA AGCCAAAAGC NCACATTGT 60  
 ATGCNTIAGG TCTTCTTAAA ATGGTATCTG TAAACATGTG TCCAATATAA AANCTATTTT 120  
 NAATAAANG TTACATGAAA 140

SEQ ID NO:3544

SEQUENCE LENGTH:138

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04157

## SEQUENCE DESCRIPTION:

GATCAGCAAT GAAGAACTGG NCGGACAAAA TTNAACGTTN ATGTAATGGN ATTCCAGATG 60  
 TAGGCATTCC CCCAGGTCT TTTATGTGC AGATTGCAGT TCTNATTCAT TTGAATAAAA 120  
 AGGAACTTGG AAANCAA 138

SEQ ID NO:3545

SEQUENCE LENGTH:137

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04158

SEQUENCE DESCRIPTION:

GATCTAAATG GGCCAGGTG TTTACCCCTTA TNNGTTTTTC TGCTAAATNA TGGAGGTTTG 60  
 GGGAGTTCCT TCTCCACTTG TTTGTGGAGG CCTGGGGAGT TTTNNAGAC CCCCAGTAA 120  
 ACTNGTTTAA TCCTAAA 137

SEQ ID NO:3546

SEQUENCE LENGTH:136

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04159

SEQUENCE DESCRIPTION:

GATCCCTGTA GAGGTGGTAT TAAAGATGGT CACTGAGATT AAGAAGATTC CTGGTATTTT 60  
 TCGAATTATG TATGACTTAA CATCAAAGCC CCCAGGAACT ACTGAGTGGG AGTAATAAAC 120  
 TTCTTGTCT ATTAAG 136

SEQ ID NO:3547

SEQUENCE LENGTH:135

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04160

SEQUENCE DESCRIPTION:

GATCCTAAAA TNNTCTACTT TTGTNGCCTT ATCAGTNCCT TGCAATCTGC CTGTGGTTAT 60  
 CAGCACTTAA AGCACAATTT TGAAGGGGAA AAAAATGATA ATCACCTTAG TCCCAAAGAA 120  
 ATAATTGTC ANNCN 135

SEQ ID NO:3548

SEQUENCE LENGTH:134

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04161

SEQUENCE DESCRIPTION:

GATCTGGAAT GGCTGGGAGT GGGGAGGGCG TGGAGACAGT CTACGGAAG CGCTANAGGA 60  
 CCCCCGAGAG GGTGCAGTGG AGCCCTGAGC ATTGTAATAT GCGGCCCAGC CTATAAACAG 120  
 CCTCCGTGCT TAAA 134

SEQ ID NO:3549

SEQUENCE LENGTH:134

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04162

## SEQUENCE DESCRIPTION:

GATCCTTTGC TGTAAGTNG GAGAGACCAG TCCCAAACAG AGGGGAATTT TAAGCCCTTC 60  
 TCATCACCCA ATGGATGTT TTTGCTTATA GCAAATTCCT GCAAAATAAA TAAATAAATA 120  
 TTTGCAAAAC TAAA 134

SEQ ID NO:3550

SEQUENCE LENGTH:133

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04163

## SEQUENCE DESCRIPTION:

GATCTATGGG AAGATACTTA TTTTCTGAG GTCCTTATGT CCTGTCATAT AATTAAAGAC 60  
 TCAAGAGAAT TTATGTGAAA TGCTTTCTGT ATGCCCAAAT CTTTAGATTA AAATTATATA 120  
 GCTGCTCCTG AAA 133

SEQ ID NO:3551

SEQUENCE LENGTH:132

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04164

## SEQUENCE DESCRIPTION:

GATCTCAGTT CCNTAAAAA TGATAAAAT TTTTCATGTA TATTACATAT CTACCTACCA 60  
 GAAATCCTTT TTACAATTTT ATATACAATC ATTTTAAGAC CTTTTTGAAA TAAATAATGC 120  
 AAATGAAC TA 132

SEQ ID NO:3552

SEQUENCE LENGTH:154

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04165

## SEQUENCE DESCRIPTION:

GATCACGGGG TGGNAGGNAA CCGNGGCGTC CCTGCNTGGG GCCCATGGGT GANACACTCC 60  
 AGTACTGAGA CCTAGAGTCC AGATGCTTGT AGGAGCCAAG TCGTGTTCTA AGTATTTATT 120  
 TAAAACAAA GAATCACGTT TTCCCATTTG TAAA 154

SEQ ID NO:3553

SEQUENCE LENGTH:213

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04166

## SEQUENCE DESCRIPTION:

GATCCTTAAT TGTAGCCTTT GAAGGATGCC CTGTGTAGAT TATTCAGTGC CACAAATTGA 60  
 AAGCTTCCAT GTTTAATNTT ATCCTCTTGC TATATAAATA AAGCAAATAT ATTTAGGCCA 120  
 GGGTCTCACT GAGGGGGAGC TGTCTTGTCA TCTTTTAGAG TAACTATTG TATAAACATA 180  
 TGCAAACAGC CCTAAATAAA TCTAAAGTCT AAA 213

SEQ ID NO:3554

SEQUENCE LENGTH:125

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04167

SEQUENCE DESCRIPTION:

GATCCCAAGG GCCCAGATAA CGCCCCAAC TTCTTGGGGT TCACACGGT CCTGAGACAT 60  
CTGGGAACTG CCTCTGCCTG GNCCAAAGCT ATTCCATTAA AACTTTATTG CTGTNCTTAC 120  
TCAA 125

SEQ ID NO:3555

SEQUENCE LENGTH:127

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04169

SEQUENCE DESCRIPTION:

GATCTGTGTA CAATTTTNGT CACTANGACT TTCCTCCAAG AACTAAGCCA ACTTGATGTN 60  
NCAAAGCACA GCTGTATATA ATGGTGATGT CATAATAAAG TTGTTTTATC TTTAAGTAA 120  
AAGTAA 127

SEQ ID NO:3556

SEQUENCE LENGTH:126

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04170

SEQUENCE DESCRIPTION:

GATCAAGGAC TCTGGATAAT TGGCATAACA TCCTGGAATA GCTGAAACAG AGATATTATT 60  
CTCTGCTGTC CTCTGTTGTC TTTGTCTTT CACGTCTTAA TAAAAGTGCT GGTGACAAGA 120  
GTGAAA 126

SEQ ID NO:3557

SEQUENCE LENGTH:123

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04171

SEQUENCE DESCRIPTION:

GATCAGAGCC ATACCCCTCT TCACCAATGG GAAGTCAAGA CACCTATGGG TAAAAGTTCT 60  
CTCTGATGCA TGAAACTCA GAGTGATAAA GTAATTTTAA AATAAAATT TGGAGAAAGC 120  
AAA 123

SEQ ID NO:3558

SEQUENCE LENGTH:121

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04172

SEQUENCE DESCRIPTION:

5 GATCTAAAAG TTTTCACACA TAAATTTTCAT TAATTTGAAA GATTATTTT AACTGCATA 60  
 GGTCCACTTG CCTCTAAATA AAATNAACCT AAAATAAAAA CAAACTATAC TTTGTGAGAA 120  
 A 121

SEQ ID NO:3559

10 SEQUENCE LENGTH:121

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04173

SEQUENCE DESCRIPTION:

15 GATCTCCCC AACCCACAA AATGCTTAAA AGATAACTTA GCTCTTTNTT CAGGGCTCAG 60  
 TCCTTTGGAT GTAATCCGAC TAGGCCAGTN AACCTAAATA ATAAATATCC TCCTCAACAA 120  
 A 121

20 SEQ ID NO:3560

SEQUENCE LENGTH:120

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04174

SEQUENCE DESCRIPTION:

25 GATCCTGAGT TTTCTGGGAC AATTCCAGCT TTAATCAATA CATTTTGTTA AATGTGCCAT 60  
 AAAATGAGAC TTTTACGCC TTTATAAGGC CTTAGATGTA AATAAACTCA CCCAAACAAA 120

30 SEQ ID NO:3561

SEQUENCE LENGTH:119

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04175

SEQUENCE DESCRIPTION:

35 GATCATTGTA TTCAGAGATT GTAAATGAAA AAATATAGAA ACTATTTAGT TTTGGTAGAT 60  
 TTTTCTCTG ACAATGTGAC CAGACTGAAT TTCCTCATAA AGAAAAATG GCGTGCAAA 119

40 SEQ ID NO:3562

SEQUENCE LENGTH:118

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04176

SEQUENCE DESCRIPTION:

45 GATCCCAGCA TTTCCATCG ACTTGTAATT GTTCTGCTA CCTGACAATC ATCGCCTTGA 60  
 GTACTGGGAC AACCTTTGAT TACTCATTAT ATCCTCAATA AATATTTGTT GAACTAAA 118

50 SEQ ID NO:3563

SEQUENCE LENGTH:118

55

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04177

SEQUENCE DESCRIPTION:

GATCCTGGCT AGANTGNTAA TTAAGATAT TTAATTGAA GCACCATTN ANTGTTCGTA 60  
CTAGTAGAAA ATGATGTGAA TTCNTTCT GTTCGGCTCC TATTTTCCTC ATCATTN 118

SEQ ID NO:3564

SEQUENCE LENGTH:82

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04179

SEQUENCE DESCRIPTION:

GATCATAGTC GGGCATACTT ATCTATATCC NTAACCTCTA TATCTTTAAA TAAATGTGAG 60  
NACTGTTCTC ATGGAGANGA AA 82

SEQ ID NO:3565

SEQUENCE LENGTH:214

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04180

SEQUENCE DESCRIPTION:

GATCTAAAGC NTTTTGTCA GATTATTTAA TATNATGACT TCATGCTTTA TTATGCCTTA 60  
TNATGGCTGA CGTATTACTG TGGTGAAACA AAATATCTTT AAAAGTTAAA ACATCCAGAT 120  
ATATAAGCAA TTTNCCCTA AGGATAAAGT ACCTTTAAGC ATGAGTGTAT CACAGCTTTC 180  
ATTAGGNAAA CTTTTCATTA CATACTTGTT TAAN 214

SEQ ID NO:3566

SEQUENCE LENGTH:102

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04181

SEQUENCE DESCRIPTION:

GATCCCNAA TGTGTATGAA TGA CTGAGGC TTTGTAAAT AAGGGACGTT TGTTTGAATA 60  
AAGTTATTTG ATGGGGTCAA AGAAGCCATA TGTGATTGA AA 102

SEQ ID NO:3567

SEQUENCE LENGTH:101

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04182

SEQUENCE DESCRIPTION:

GATCCTCTCC TTAGTCTTAG CTCATGGGGC TCTTTATAAA GGAGTTGGGG GGTAGAGGCA 60  
GNAATAATNGG AACCGAGCTG AANGCAGAGG CTGAGTTAGG N 101



5 SEQ ID NO:3568  
 SEQUENCE LENGTH:99  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04183  
 SEQUENCE DESCRIPTION:  
 10 GATCTGCAGT GCTTCACTGG AAATAATTTA TTCATTGCAG ATACTTTTAA GGTGGCATT 60  
 NATTCATTTC CTGTGCTTTA AATAACAAA TGTACCAA 99

15 SEQ ID NO:3569  
 SEQUENCE LENGTH:97  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04184  
 SEQUENCE DESCRIPTION:  
 20 GATCACCTG GGCACATGTT GTCAGGACCT CCTGGGGTTG TGTCATGGAT GCGTGTCTC 60  
 AACCTTAGCA AAATAAACTT TCTAAATTAC TGAGAAA 97

25 SEQ ID NO:3570  
 SEQUENCE LENGTH:95  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04186  
 SEQUENCE DESCRIPTION:  
 30 GATCTTCAGT GTGTCTGCAT AAGCTAACTT AAGATGAATT TAAGTACANN TTTCTGAAAT 60  
 ATTTCTATTG AAATAAATTA CTAAAAATTA NAAA 95

35 SEQ ID NO:3571  
 SEQUENCE LENGTH:94  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04187  
 SEQUENCE DESCRIPTION:  
 40 GATCTTTGTG AATTCTATGA ATGTATTAAG TTATCATATG TACTCCCCAA AATAGGTACA 60  
 TCTATTATGT ATCAATAAAA AANTTTAAAA CAAA 94

45 SEQ ID NO:3572  
 SEQUENCE LENGTH:93  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04188  
 SEQUENCE DESCRIPTION:  
 50 GATCCCTTGA GCCGAGGAGG TTGAGGCTGC AGTGAGCTAT GGTACACCA CTGCACTCCA 60  
 GCNTTGGTTA TNATGCAAGA CCCTGTTTAC AAA 93

55

EP 0 679 716 A1

SEQ ID NO:3573

SEQUENCE LENGTH:89

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04189

SEQUENCE DESCRIPTION:

GATCGCACAC CTTGCAACA GATGTGTTCT GATTCTCTGA ACCTACAAA TAGTTATACA 60

TAGTGAATA AAGAAGGTAA ACCATCAAA 89

SEQ ID NO:3574

SEQUENCE LENGTH:90

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04190

SEQUENCE DESCRIPTION:

GATCAGTGTC TCTAGTCCTA CCCAGTTTAA AAGTTCATGG TAAGATTGA CCTCATCTCC 60

CTCAAATAAA TNTATTGGTG ATTTTNGAAA 90

SEQ ID NO:3575

SEQUENCE LENGTH:87

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04191

SEQUENCE DESCRIPTION:

GATCCGCCAG GTGCGGCGC TACTGCAGGC ACAGCAGGCC TAGGTCCTCC CACACCTGCC 60

CCCTAATAAA GTGGCGCGA GAGGAAA 87

SEQ ID NO:3576

SEQUENCE LENGTH:87

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04192

SEQUENCE DESCRIPTION:

GATCCACCCA CACCTAAGTC ACAGAATTTC TAAGTCCCC AACTACTCTC ACACCCNTTT 60

AAAGATAAAG TATGTTGTAA CCAGAAA 87

SEQ ID NO:3577

SEQUENCE LENGTH:83

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04193

SEQUENCE DESCRIPTION:

GATCAAAGTG AATGAAACCC CCACACACAC ACACATGCAT ACACACACAC ACACAGCCAC 60

ACACACAGAA AATATACTGT AAA 83

SEQ ID NO:3578

SEQUENCE LENGTH:83

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04194

SEQUENCE DESCRIPTION:

GATCCCTATT CTGCGTGTAT GTGTTTGCAC ATGAGTGTTT GTAGACCATA GACCATTAAA 60  
AAATACGGAA TTCAAAAGTT AAA 83

SEQ ID NO:3579

SEQUENCE LENGTH:84

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04195

SEQUENCE DESCRIPTION:

GATCTATGAA TGTTTTNTT AAAATTTACA AAGCTTTGTA AATTAGATTT TTTTAATAA 60  
AATGCCATTT GTGCAAGNTT TAAA 84

SEQ ID NO:3580

SEQUENCE LENGTH:112

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04196

SEQUENCE DESCRIPTION:

GATCACATAA AGGCAAGAGG ATACTTCATG AATAATACAT TTNAATGCAA ATAAACAGAT 60  
GGTTCACCTC TACTAGCTAT NCCCTGTCT TNNTATACAC TGAGTAGATT AN 112

SEQ ID NO:3581

SEQUENCE LENGTH:74

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04197

SEQUENCE DESCRIPTION:

GATCTATGTC TGTTGGTGGC AATGTGAGGG TGATACTCTC TCACTCTAAT AAACCTGGCA 60  
CTTCTCCGAG TAAA 74

SEQ ID NO:3582

SEQUENCE LENGTH:74

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04198

SEQUENCE DESCRIPTION:

GATCCTGTAT GTGTGTTGAG ATTTAGAGGT TTCATTTATN TTGTCTGCTA ANAAATTGTT 60  
ACTCTAATAA TAAA 74

SEQ ID NO:3583

SEQUENCE LENGTH:71

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04199

SEQUENCE DESCRIPTION:

GATCACTGTA TAGACTGTGA AATTGATTT CTTATTACCN ATTGTAAAT AAAGTGTGTG 60  
AGACAGACAA A 71

SEQ ID NO:3584

SEQUENCE LENGTH:71

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04200

SEQUENCE DESCRIPTION:

GATCTATTTC TCTGTCTACT TTGGANATGA TTGCATAATA AATAAAATTT TACTGTTTTT 60  
TTAAAAGGAA A 71

SEQ ID NO:3585

SEQUENCE LENGTH:69

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04201

SEQUENCE DESCRIPTION:

GATCTAAAGA TGTTTAGGGA AGAGCTCGAC TAAAGAACAA TGAAATAAAT GGTCCAAGGG 60  
GAAGTCAAA 69

SEQ ID NO:3586

SEQUENCE LENGTH:65

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04202

SEQUENCE DESCRIPTION:

GATCAAAAAT GTAAGTCTAT TGGTAGAGAT TAAGTAAAGT ATTTATTGCT ACATCATAGT 60  
TGAAA 65

SEQ ID NO:3587

SEQUENCE LENGTH:53

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04203

SEQUENCE DESCRIPTION:

GATCTGTGTT GCATTTCAAA ATAAAGTGGT GTGTGCTCTG CCTGGATTG AAA 53

SEQ ID NO:3588

SEQUENCE LENGTH:153

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04204

SEQUENCE DESCRIPTION:

GATCTCAGCC CAGGACGCA AGCAAGCAGG TCTTGTCAGC AAGATTTGTC CTGTTGAGAC 60

ACTGGTGGAA GAAGCCATCC AGTGTGCAGA AAAANTTGCC AGCAATTCT AAAAATTTGT 120

AGTAGNCGAT GGNCNAAGNA TCAGTGGATN CAN 153

SEQ ID NO:3589

SEQUENCE LENGTH:29

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04205

SEQUENCE DESCRIPTION:

GATCCAAATA AAGGTAGCTG CTGACCAAA 29

SEQ ID NO:3590

SEQUENCE LENGTH:64

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04206

SEQUENCE DESCRIPTION:

GATCTCTCTA CAAGAGCCCC TGCCCCCTCTG TTGGAGGCAC AGTTTATAGAA TAAGGAGGAG 60

GAGN 64

SEQ ID NO:3591

SEQUENCE LENGTH:64

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04207

SEQUENCE DESCRIPTION:

GATCCTTTGC GTGACAGTCT TGTATGGAAA ACAGATGCTG ACAGAATTGT AGACTACCAT 60

NCCN 64

SEQ ID NO:3592

SEQUENCE LENGTH:63

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04210

SEQUENCE DESCRIPTION:

GATCTCGCCT TGTTCCTTAC AAGCAAACCA GGGTCCCTTC TTGGCACGTA ACATGTACGT 60

ATN 63

SEQ ID NO:3593

SEQUENCE LENGTH:63

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04211

SEQUENCE DESCRIPTION:

GATCTTTGCG AATTACAATG CATATATGTC TATTTATTCA ATATCTGTCA TATAATANCT 60  
ATN 63

SEQ ID NO:3594

SEQUENCE LENGTH:58

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04213

SEQUENCE DESCRIPTION:

GATCTTAAGA AACTTCATA CTGTATGAAT AAGAAAATAA AATATTAAA ACTTGAAA 58

SEQ ID NO:3595

SEQUENCE LENGTH:64

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04214

SEQUENCE DESCRIPTION:

GATCGCCAAG TTCAAAGCTG TGCACATGTG GACACTCAAT AAATGTTTTCAT TGGTGAAAAA 60  
CAAA 64

SEQ ID NO:3596

SEQUENCE LENGTH:56

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04215

SEQUENCE DESCRIPTION:

GATCCAAAAA GAGTCGACCN GCATTNTTTA TATTAAAAAT AAAGTCAAGA TTAAAA 56

SEQ ID NO:3597

SEQUENCE LENGTH:52

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04216

SEQUENCE DESCRIPTION:

GATCTTTGTT AATGTCTTGA TTCTGTTGCG AAAGCACAGA CTAGTGCTTA AA 52

SEQ ID NO:3598

SEQUENCE LENGTH:52

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04218

SEQUENCE DESCRIPTION:

GATCGCACCA CTGAGCTCCA GCCTGGGCAG CTGNATGAGA CTNCATCTCA AA

52

SEQ ID NO:3599

SEQUENCE LENGTH:51

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04219

SEQUENCE DESCRIPTION:

GATCTGGAGG GACACACAGG AGACACCTGG CATAACCAAA AAATGATTAA A

51

SEQ ID NO:3600

SEQUENCE LENGTH:51

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04220

SEQUENCE DESCRIPTION:

GATCGAAAAC ATATAGANAA AATAAAATGT GTGGTTGCAC CTGTACTGAA A

51

SEQ ID NO:3601

SEQUENCE LENGTH:466

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04247

SEQUENCE DESCRIPTION:

GATCTAGAGG AGGATTGCA GGAAGAGCTC GTGGAAGAGG TGGTGACCAN CAGAGTGGTT 60  
 ATGGGAAGNT ATCCAGGCGA GGTGGTCATC AAAATAGCTA CAAACCATAC TAAATNATTC 120  
 CATTTGCAAC TTATCCCCAA CAGGTGGTGA AGCAGTATTT TCCAATTTGA AGATTCATTT 180  
 GANGGTGGCT CCTGCCACTG CTTAATAGCA GTTCAAACCTA AATTTTTTGT ATCAAGTCCC 240  
 TGAATGGAAG TATGACGTTG GGTCCCTCTG ANGTTAATT CTGAGTTCTC ATTAAAAGAA 300  
 ATTTGCTTTC ATTGTTTTAT TTCTTAATTG CTATGCTTCA GANTCATTG TGTTCATGC 360  
 CCTTTCCCCC AGTATTGTAG AGCANGTCTT GTGTAAAGC CCAGTGTGAC AGTGTGATGA 420  
 TGTAGTAGTG NCTACTGGTT NTTAATAAAA NCCNTNTTGT ATGAAA 466

SEQ ID NO:3602

SEQUENCE LENGTH:429

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04248

SEQUENCE DESCRIPTION:

GATCTATAAA TCAAGAAAAT CCATTGTCAT AACCATTTTT AAAAGTCAAT AATTAAGACA 60  
 TCCTTAATTA AAAAGTTTCA AATCTAGACA CTAATGTGT GTGAATGTAC AAAGAAAACA 120  
 AACCATTGCT TATGCTGTTA TATACTAGAG AAATTTTGT TTGCTTGCTG TTTTAACTTG 180  
 ACAGATGAAG GACTTTAGTT GAACCTCATA TTGTAAGAAC TGTTAATAAA AGTTGTCAAG 240

TAAAAAGCGC TATATCTAAA AAGACTTTAT GAACAGTTAT TCTATCAACT TTAAAGGGT 300  
 TTAAACCTG CCCAGAAATT ACCTTGGTAT CTGAAGTTTC CCTCTGTCTC CTCCCTCTAA 360  
 TTNAGGCTTG TTATTTGTCA TGCACCAGCA TTTGGGGGNT AATAANAATT TCTTNGGTTT 420  
 TNGTGGAAA 429

SEQ ID NO:3603

SEQUENCE LENGTH:419

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04249

SEQUENCE DESCRIPTION:

GATCTGTTGT TTGTTTTTAA GGTGGTGTTT TGTAACTTC CAGCAGGATG CAGAATCTAA 60  
 CTGGTAAACC TATAAATTGG TCAAATTTNA CCCATGTTGT TTCTTTGAAA ACAATGTATA 120  
 TNCTCTAATA TTTGGATATA GGGTATATGA NCATTAATGC AACTTAATTG TATTCCAAG 180  
 TACAGTACAT ATGTNCAGAT TTCTTTTCT AACCTTATTT AGTGATAGAG GTGTGGTAAA 240  
 CNCTTCCATT ATGTTTATGT ATTANCACTG TAATTTTGTG ATTTTATAT ATTTNGATGT 300  
 TATGTAAC TAATGATACA GGATTAGGTA TTTCTTCTG TATTCCTTTT TATGTGGAGA 360  
 TGATATTTT ACATAGCAAA GTATTGTAAT GCATTAATAA TAAATGGTCA ACCATTAAA 419

SEQ ID NO:3604

SEQUENCE LENGTH:419

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04250

SEQUENCE DESCRIPTION:

GATCTGCTAG TTCCAGGCCT CTAAGACAGG AACGTATGTG CCATAAGTGN GTCTACTTCA 60  
 CAGACTCAAT GAGGCAGAAA TTATTGTAGT TTTCTCCTAT TTCTTCTGCA CCCAACTTTC 120  
 TNCTTGATTT TCAAAGGCCA GGCCATGTAC ACTAACGTCC TTGAAATTTG CAGTTCTGTA 180  
 TGCTTCTATT CCAATCATT CATTACCAAT AAAAACGGAA TACCACCCTT TCCATTTTAT 240  
 AGNCCTCATC CCCTATTTCT GTCAGACAGT TATATGACAG GGTGGNCNGN GGGCCTCTTA 300  
 GTTCATCCAA AGTCTNNCCT GNAGTGCTAG NCTTCAGAC TCTATCACT GGAAATCNTT 360  
 AAGGGTTGAG GGGGNTTTAN TTTCCAGNA CTTGTGNAGG GNTTCAACTG TCAAAACTN 419

SEQ ID NO:3605

SEQUENCE LENGTH:404

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04252

SEQUENCE DESCRIPTION:

GATCCGACAC AGAGAACAGG AGGNACTAGA GGCGACANAN AGNAGGGCTT TAAGCCAAAC 60  
 TACATGGAAA ATGGTGATAA AAGAAAATNT GGCTGAAGTT ACCCGAAGTT CAGCTTGACG 120  
 TGTAATTCAG AAGAGTTAAG ACCAGAAGTA CTGGAATCAT ACTTCCTTTC AGTCTTGCCA 180  
 CTTGCCTAGT GAGGCTTTTC CGAACCTGGA AGGAGACGTC TAGAAATCCC AACTTTGCTG 240  
 TGTAAGGACC ATTAGCTGCA AGTCAGTGGA AGTCTATAGA AAANAGTGTG AATTCCATAG 300  
 TGGTCTTGAC TTCTTAGCAA GGATTGGGA TAAGTCTAAA ACTTCAGACT TAAAGCTTTG 360



AAGCATGTTA ACTGCATGAN ATATTAANCA TTTCGAACTT CAAA

404

SEQ ID NO:3606

SEQUENCE LENGTH:403

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04253

SEQUENCE DESCRIPTION:

GATCCATGAA TTAACAGAGG CATATATTTA AAATGAAATT TAATGAGCAC TTAGTGACTT 60  
 CATTTGTTC AAGATATTTG ATTTCTTATT GTGTGCATGG GAGGTTTACA AAAGACAGAC 120  
 TGTCCCTATG CTTGTNCAGC TTACAATCTA TTAACTATT AGAGGCCCTG TGAGATGTAG 180  
 GCAGTTATTT ACAGATGAGA AAACAAACAC AGCAGTGGCA ATGCTGGGAA TGGCCAACAG 240  
 GCTTGGAAAT CAACTCAGTT TAGCACAAA GCCAGTNTA TTAAGACCTG AAGTTCAACA 300  
 GTGGATTCTT TACCCAAATA GTTTTAAAG TATGCTCTAA GGNCCAATGT TTTAATGAA 360  
 ATCTTGGNTT NCAAGTNGG NNTAAAAGGG TTCTGAGCAT AAA 403

SEQ ID NO:3607

SEQUENCE LENGTH:396

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04256

SEQUENCE DESCRIPTION:

GATCTTACTT CGTTGACCCA TATTTTCCC CTGACCAAGT TACCTGTAAA CTGGAATTTG 60  
 CAAGGGGATG CTGTGATGAT AACCCCTTTC TATTGCTGTA ATGTTTCATAT AACCTGGGAA 120  
 ACTGAGAGAA GGGGATGTGT AAATAAAGC TTAACATTT TAGTAATGTG TTAATATGTC 180  
 ACTCTCTCTT ACCCTGTTTC CCTTTTTTGC CAGATGATGA TTTTITATT TTTATTTTGT 240  
 ACTTTACTGG ATGACTGTGA AGCGNTGAGT ATTGGGTTGG GGTAGGTGTG TTGATTTTGA 300  
 GAGTGATGT TAAGACCTGA AGGGGAACCTA CTTGAGGATG ACTTAAGAAG CATCCCATGC 360  
 AAATATCTTG TTTTGGCCNG AATAAATAT TTCAA 396

SEQ ID NO:3608

SEQUENCE LENGTH:392

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04257

SEQUENCE DESCRIPTION:

GATCTGCCCC CCTTGGCCTC CCAAAGTGCT GGGATTACAG ACATGAGCCA CCACGCTTGG 60  
 CCGGGATAGT ATATTTTAT AGCACTTCCC CTACTGATTG CTGCCTTCTC TGTGGCTACA 120  
 AGGGACCCAC AGAATTACAG GGAAGTTACA GGGNNGCAGG TTTCATCTCA ATATTGGGAG 180  
 AGATTTCAA CAATCACACC NNNNNNCGA AGGAGTGGGC TGTCATAGG AATTTTATT 240  
 CCCAGTCCGT CAGGAATTT GTAGAAGGC TTCATGTGCT GGTACCAATA GGACAGGAAG 300  
 ATTTAATCA GCTTACTAT CTATGTTTT TTATGGAAAC TGTGTGTATG TATACATACA 360  
 TTTTCAAAA AGNANAAATT AAATGATTAT AG 392

SEQ ID NO:3609

SEQUENCE LENGTH:392  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 5 CLONE:HUMGS04258  
 SEQUENCE DESCRIPTION:  
 GATCCGCCCC CCTCCGCCTC CCAAATTGCN GGGATTACAG NCCTNAGCCA TNCCCACCCG 60  
 GCCAATAAAA ATTTTTTTAA AGCTAAAATT GACTCTCATG CAAATAAGAT AAAATGAACA 120  
 10 TATGTTAAAT ATTTTAACTT AATGAGAGAA ATAGTAAGAT GTTACCAGTT ACTTGATGAT 180  
 GGAGGAAAGG ACGAAAAGCC AAGGAATACA TGGAAATGCAG CTCTAGGTGC TGAAAAAGGC 240  
 ANGGAAAGGT TCTACGTTAG NGCTTCCAGA GGGAGCTCAG CCCTGTCANC ANCNTNGTTT 300  
 CAGCTCAGTC ATATCGNTGT TTAGACTTTC TGGTCCCCAG NGCTGGGCGG GGGATATATT 360  
 TCCTGCTGTT TTAAGNCNCC NNATTTTGTG GN 392

SEQ ID NO:3610  
 SEQUENCE LENGTH:391  
 SEQUENCE TYPE:nucleic acid  
 20 TOPOLOGY:linear  
 CLONE:HUMGS04259  
 SEQUENCE DESCRIPTION:  
 GATCCTAAGG GGTTCAGGGG GACCCTACCC CCACCTCAGG TTGGGCTTCC NTGGCCACTC 60  
 ATGCTCCACA CCAAAGCAGG ACACGCCATT TTCCACTGAC CACCCTCTAC CCTGAGGAAA 120  
 25 GGGAGACTTT CCTCCGATGT TTATTTAGCT GTTGCAAACA TCTTCACCCT AATAGTCCCT 180  
 CCTCCAATTC CAGCCACTTG TNAGGCTCTC CTCTTGACCA CTGTGTTATG GGATAAGGGG 240  
 AGGGGGTGGG CATATTCTGG AGAGGAGCAG AGGTCCAAGG ACCCAGGAAT TTGGCATGGA 300  
 ACAGGTGGTA GGAGAGCCCC AGGGAGACGC CCAGGAGCTG GCTGAANGCA CTTTGTACA 360  
 30 TGTAATGTAT TATATGGGGT CTGGGGCTCC N 391

SEQ ID NO:3611  
 SEQUENCE LENGTH:386  
 SEQUENCE TYPE:nucleic acid  
 35 TOPOLOGY:linear  
 CLONE:HUMGS04261  
 SEQUENCE DESCRIPTION:  
 GATCCGACCG CGTGNTGCCG CTCTGCTCTC TCATACGGGT GTATGTTTGG TTCCATGTCA 60  
 40 CAGCCCCCTA GGAGCCAGTN ATGCTCGGCC TTGCGCCCGT NCCACCTCCC AGGCCACCCT 120  
 TCCTGGGCTT CTGGGCCACC TGCCCTCGGG GGGCCCTGC NAGGGTGCCT GGNGTCCCA 180  
 CGTGTCCTCG GGCTTTTCCA GGAAGCCCGA GCCCAGGACC TGTTGGCAGA GTTGCCAGGG 240  
 TTACATTTT NAAGCACCTG CTCCTTTTNT TGCAGTGTAT TTTCTACAAC CAGATTGTAT 300  
 45 TAATATTTT AACTTTGCC TTTTAAAAA TATACCTAAT ACAATATATT TAATTNTGAA 360  
 TTAACCTCTT AACTTTTCT TCCAAA 386

SEQ ID NO:3612  
 SEQUENCE LENGTH:375  
 SEQUENCE TYPE:nucleic acid  
 50 TOPOLOGY:linear

55

CLONE:HUMGS04264

SEQUENCE DESCRIPTION:

5 GATCCCTTTG GGGCATGAAG TGTGACAAGT GTGGGCTCCT GAAAGGANTG TNCCAGAGAA 60  
 ACCAGCTAAA TCATGACACC TTCAATTTGC CATCATGACG CAGACCTGTA TACATTAGGN 120  
 TAAATCTGAA TTTCCACTGC TTTGGAGAGT CCCACCCACT AAGCACTGNG CATNNAACA 180  
 GGTTCCTTTG CTCAGATGAA GGAAGTAGGG GGTGGGGCTT TCCTTGTGTG ATGCCTCCTT 240  
 AGGCACACAG GCAATGTCTC AAGTACTTTG ACCTTAGGGT AGAAGGCAAA GCTGCCAGTA 300  
 10 AATGTCTCAG CATTGCTGCT AATTTTGGTC CTGCTAGTTT CTGGATTGTA CAAATAAATG 360  
 TGTGTAGAT GGAAA 375

SEQ ID NO:3613

SEQUENCE LENGTH:372

15 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04265

SEQUENCE DESCRIPTION:

20 GATCCTAGAC CAGCATGCCA GTGTGCCAAG GCCACAGGGA AAGCGAGTGG TTGGTAAAAA 60  
 TCCGTGAGGT CGGCAATATG TTGTTTTTCT GGAACCTTACT TATGGTAACC TTTTATTTAT 120  
 TTNCTAATAT AATGGGGGAG TTTCGTACTG AGGTGTAAAG GGATTATAT GGGGACGTAG 180  
 NCCGCNNTCC CNNGTGTGT AGGTTTCTCT TTTTCAGGCT TATACTCATG AATCTTGTCT 240  
 GAAGCTTTTG AGGGCAGACT GCCAAGTCCT GGAGAAATAG TAGATGGCAA GTTTGTGGGT 300  
 25 TTTTTTTTTT NACACGAATT TGNGGAAAAC CATTAAANTCA TTCAAAATAA TAANCTNTTT 360  
 TTATTNGGGA AA 372

SEQ ID NO:3614

SEQUENCE LENGTH:372

30 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04266

SEQUENCE DESCRIPTION:

35 GATCTAAATA TATATTTTGT ATATTATAAT ATTTTAGGAA TAGCTTAATT AAGANCTCAC 60  
 AGACTTTGAC AAAGTGGTAA CTAGACTTTT AATTACTAGA TTCTTCAAAT TAGGCTTAAT 120  
 GCCTGCTAGC ATGCCAATCC AATCCCATGA CTGATGTTAT TATACACTAT GGCAAATACA 180  
 AAGTTGTAGT ATTATGGTTC TTGATGGTGT GATTACTTA TGTAATTAT GTACAAATT 240  
 40 AAGTTCAATG AAACACTGAT TTAATGTACT GAAAGGTAAA TAGTACCATA GTGAATTATT 300  
 TCCTGTCTTG CCTTAGGTTT ATTTTATNA TCTTCAATAT TAGANTAAAT GCTAAATTAT 360  
 TTCATTTTA AA 372

SEQ ID NO:3615

SEQUENCE LENGTH:370

45 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04267

SEQUENCE DESCRIPTION:

50 GATCTGAACT CCTTATACAT AAGAAGGTGT GTATATTAAT CCAATTATGG ACTTAAATA 60

55

EP 0 679 716 A1

TTTTAAAGT ATAAATACCC TTATTTGCTG CAAAGACCAG TGTGTAGGCA TTTGCTTTT 120  
 AGCAATATTT TTAAGTGCTC CATTTTAATG CCGAGGAATA AGTCTTTTGG CAACACAAAC 180  
 TGGTCAATAA TAGGTAATGC AGGTATGTTT AGGTAAAGCC AACAATGTTT TGCATTTTAA 240  
 TGCTTATTTT CTGTCAACAC TAATGAAGTC AACATTGCCT GAATGTCTGA ATAATGAAAC 300  
 ACATCCCNGT TTAAGATAT GTAACGAAA AAGAAATAAA AAANAAATTA AAAGGTAGGT 360  
 TTTTTTAAA 370

SEQ ID NO:3616

SEQUENCE LENGTH:370

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04268

SEQUENCE DESCRIPTION:

GATCCCATTA TATAGTATGT ATAGCTGAAA TCTGTAATTC AATCACTTTT TCTCTTTTAT 60  
 CCTCTAACCA AAAAAATTGT TAATTTTGCA TCCCAAATGT TTTAATCTT TGTATATTTT 120  
 TNAAAAATCC NTTTCTCCTC AGCANTGCCT TTTTNGTGGT TGTAAATAGA CTTACTTGCA 180  
 CTTTGAAGAT GAGTTACTCC TTGTCATCTT ACAAATATGT GATATGGTAA TTNCCATAAC 240  
 AGATGTCAGT TTTGANCCAA GAATTGGTGA TTTGTTTATA AGAAAAAAC TGGCTTCATT 300  
 NCTGTGNAAT TGCTCTTTGG NAAATTNCTN NTTNACACGT GTAAGCCAAC CTGAGGTACC 360  
 GTGATGGGTN 370

SEQ ID NO:3617

SEQUENCE LENGTH:368

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04269

SEQUENCE DESCRIPTION:

GATCCCTGCT CAAGCAGCAC AGAGGAAGGG GCAAGACGTG GCCTGTAGGC ACTGTNTCAG 60  
 CCTGCAGAGA AGAAAGTNAG GCCGGGAGCN TGAGCCTGGG CTGGAGCNTT CTCCCTCCC 120  
 CANTTGGACT AGGGGCAGTN TTAATTTTNA AAAGGTGTGG GTCCCTGTTT CCTCTCCAG 180  
 GGGTCCAAGG GAACAGGAGA GGTCACTGGG CCTGTTTTTT CCCTCCTGAC CCTGCATCTC 240  
 CCACCCCGTG TATCATAGGG AACTTTCACC TTAATATCTT TCTAAGCAA GTGTGAATAG 300  
 GATTTTNACT CCCTTTGTAC NNCNGNCTGA GGAAACGCAA ATAANAAGGG CAACATGTTT 360  
 CTNTTAAA 368

SEQ ID NO:3618

SEQUENCE LENGTH:364

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04270

SEQUENCE DESCRIPTION:

GATCGGCCCA GCTCCTGAAC TNTGANGAGG CCATTCATAT GGCATTCCTG GAACAAAACA 60  
 CTGCACAGGT ACCAGCCTCT CCACTCCTGA CCGGGTGGT GCTGAACAGT CAGGGATTGT 120  
 NCTTGAAC TA GACTTCTGAT GCTTCTTGCA ATCTTCTTTC ATCTTCCCT GAAATACACA 180  
 AAATAACAA NTACAATAAC AAATAGTAAT TAANTGACTT TCAGGATAAC ATCTAGTTGT 240

TCAGACTTCA CCCTTCACAG GTGTGTGTGT ATGTGTGTTT ATGTCTGTAT ATTGANGCAN 300  
 TTTGAATTTA TTTTACTGTA TATNTNCTGA GTAAANGACT GANATGNNCT NCTTGGGTCA 360  
 GAAA 364

5 SEQ ID NO:3619  
 SEQUENCE LENGTH:363  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 10 CLONE:HUMGS04271  
 SEQUENCE DESCRIPTION:

15 GATCTGAAGC CTTCCATAAA TNAGAGGCCA TTCATATGGC ATTCTTGGAA CAAAACACTG 60  
 CACAGGTACC AGCCTCTCCA CTCCTGACCG GGTGGTGCT GAACAGTCAG GGATTGTTCT 120  
 TGAAGTAGAC TTCTGATGCT TCTTGAATC TTCTTTCATC TTTCCCTGAA ATACACAAAA 180  
 TAAACAAATA CAATAACAAA TAGTAATTAA ATGACTTTCA GGATAACATC TAGTTGTTCA 240  
 GACTTCACCC TTCACAGGTG TGTGTGTATG TGTGTTTATG TCTGTATATT GANGCAATTT 300  
 GANTTTATTT ACTGGTATAT GTTCTGAGT AAAAGNCTGA AATGNNCTNC TTGGNNCNGG 360  
 20 AAA 363

SEQ ID NO:3620  
 SEQUENCE LENGTH:361  
 SEQUENCE TYPE:nucleic acid  
 25 TOPOLOGY:linear  
 CLONE:HUMGS04272  
 SEQUENCE DESCRIPTION:

30 GATCCAGGAT GTACTTGGAT GAGGAGGCCT GGCTTATCTA GGAAGTCGTG TCTGGGGTGC 60  
 TTATTGTGTC TCCATACAGC TGTACGTGAG CCCCTTGGCC TTCTCTGTAG GTTCTTGGCA 120  
 GCAANNNGC AGCTTTTCACT CAGTGACACA AGTAATTACT GAGTCCTAAT TTGATAGCCA 180  
 CCAACTGTAC CTGGGTAGGC AAAGTCAGAT TTNGAGGAC CTTTTTCCTG ATTTGAAGTT 240  
 TTAATTACCT TATTTTCTNT TATGCTTNC CTCTGTCTTG TAATCNTNCT CTTCTAAAA 300  
 35 ANCCTCCCTA TAAATTCAAT TAATTGGGT TAATTTAGG ATAAACCCAT TTANTTCNAA 360  
 A 361

SEQ ID NO:3621  
 SEQUENCE LENGTH:359  
 SEQUENCE TYPE:nucleic acid  
 40 TOPOLOGY:linear  
 CLONE:HUMGS04273  
 SEQUENCE DESCRIPTION:

45 GATCCAGATN CTTTCGGATG TCAGGGATAT TCACATTGAC ATGTCTNNNN AGTGTTCAG 60  
 GAGATTTTAG TTGAATAGT ACAATTTTTT CTTCTTACAA CAAAACCTAG AACGGCTTCT 120  
 AACTTATTC TTCATGGCCA AGAACTACC CTAACCTATC TCGATAAATA TTTAGTTCTG 180  
 TCTTATTCT AATGTGTAAG ACAGGTTTAA AAAATAATAT ATAGATTTTG CATTATATAA 240  
 AAAAGATTTA ATTTATAGAA CCAAACTNGA ACATATGTTT AATTAGCCT AATCAGAAGG 300  
 50 TTACAGAAAA AGTTGCTGTA AAGATAGAAT AAAGGGTATT GTACTGGTCT GTTTTAAA 359

SEQ ID NO:3622

SEQUENCE LENGTH:356

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04274

SEQUENCE DESCRIPTION:

GATCTACAGC AGCTGCATCG AGGACTCCCA CAGAGGTGCT ATAGGGCTGC GCATTGCACT 60  
 GGCCATCTCA GCTATAGCCG TCTTCCTGGT CTTGGTGTCT GNCTGTATCC TTCGATTGG 120  
 CACCAGGTCT CTCTGCAACT CCATCATCTC CTTGAACACT ACAATNAGCT GTNCTGAAGC 180  
 CCAGAAAATT CCATGGACAC CCCCTGGAAC TGCTCTGCAG TTTTACTCCA ACCTACACAA 240  
 TGNTGAAACC TMTCTTGGG TGAATTTGGT ATTGTGGTGT GTGGTCTTGG TGCTCCAGGT 300  
 CGTGCAGTGG AAGTCTGAAG CCACCCATA CCGGCCTCTG GAGAGGGGTG ACCCTN 356

SEQ ID NO:3623

SEQUENCE LENGTH:420

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04275

SEQUENCE DESCRIPTION:

GATCCCCCT GNCAGACACC AAAGCTGTGA ACAGAAAGAC TGCCTGGCCA GCAAACCTTG 60  
 GGACATCAGC CTNGCCAGC CTGAAAGCAT CCGNAGTGAC CTAGAGAGTT CTGATGCACA 120  
 GTCAGACGAT GTGCCAGACA TCACCTCANA TGAGTGTGGC TCCCCCGCT CCCATACTGC 180  
 AGCCTGCCCC TCGACCCCCA GAGCCCAAGG TGCACCGAGC CCAAGTGCCC ATATGAACCT 240  
 CTCTGCCCTA GCCGAGGGAC AAATGTCTT GAAGCCAGAA GGTGGAGAAG CCAGAGTATG 300  
 AAGTGGAAAT AATGCTCCTG TTCTGAGANG AACTTTGTAA CTGCATCTTT TGGAATTTTT 360  
 TTTTTTTTT GCCCAGGGGN NAGGGTTTNT GGTTTTAAAT TTANAGGN CN TTTGGGCAAN 420

SEQ ID NO:3624

SEQUENCE LENGTH:352

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04276

SEQUENCE DESCRIPTION:

GATCAGAATT AAAC TAGTAC TATGAAATGT CCTTTTGAAT GTNAGGTCAA GAAATCCATG 60  
 TACAGAGTCG TGCAC TT CAT TGGCTGTAAAC TGTCAA ACT GCCTTG TATT AGAAGTTAAA 120  
 TCCCATCGTA AATACATCAC GAGGCCAGCT GTGTGATTTC TGAGACCTAG ATGAGAGTCC 180  
 NATTA CTCA AGCNTTGATT CAGTAAATNT TAAGCAGCAG AAGNCTTCGG ATGGGTTGAA 240  
 AATCAATNTT ACAAGGTTTT AACTCATAAA CCCATNNGGG NTTTTTTTTT TCCTCTGCAA 300  
 NNGGTTNCTA AGGCTANTCC NTGGTAACAC TNTGGGAAAN AAATNTGGAG GN 352

SEQ ID NO:3625

SEQUENCE LENGTH:348

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04278

## SEQUENCE DESCRIPTION:

GATCTCCAGT NGGCCTTTGC AGGCCCGGCC TCCTGCCCTCT NGAAGGCCTA NCACGGGCCC 60  
 GGCCCTCGGCC TCGGCCTCAC AGCAGACTCT CCACGCCCAG CTAGCTCTTG CCTCACTGCG 120  
 GCCTCCCCAG TCCAAAGCTC CTGCCTTTNG GCCACTTCGG CAGGTCCAGC TCCTGCCCTGC 180  
 CAGTGGCCTC TTTAGGCCCA GCTCATTCTT CACGTCGGCC ATTCCAGGCC CCGTTTTTCC 240  
 CTTCCGGCAG CCTCTTGGCC TCTAATTGT TTATNTTTTG TGTATAAATC CAAAAATATT 300  
 GAATTTTGA ATATTCCAC CGGGGGNGTA AATATTTTGA TAGGTAAA 348

SEQ ID NO:3626

SEQUENCE LENGTH:347

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04279

## SEQUENCE DESCRIPTION:

GATCTTTATT AAGACAGTGG AAAGTATACT ATTAAGTCAT CATAGTCTTT TGGAGACTTG 60  
 TCAAANACAG CAATNAGAAA ATAAGACCTA GCATACCGTG GAGAACCATT AAAAAATTNA 120  
 NANGAAACAA CAAGTATTAT GTCAACTTAC TTCAAAGGCG AGTTTTGGGA TTTNATGCAG 180  
 TAAAGATTCC CTGTTTTATG ATTGTCCCTT GAAAGTCAAA TGGGGGCGCTG TCCATTGTCC 240  
 TCTATTAANC TTNCAGAACT GTCACCAACA AATTTGAGTT GCCTTGCTTA GGGTTCTGGG 300  
 TAGTGAAGAT ATTNATNAT ATAATNAAAT ACACTGTTAG TACTTAN 347

SEQ ID NO:3627

SEQUENCE LENGTH:341

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04280

## SEQUENCE DESCRIPTION:

GATCAGAGGA GGAGTGTGAG TGTCTCATA CTCACAGCAA AAGGAGGGAA TTCAGGAGAG 60  
 GATTGAAGAA GCGGTTCTG TTTTAAAGGC ATTTGCAATC ATTGCTGGAG AGACAGAACC 120  
 AACAGATGGG GAACAATGGC CAGGGACTCC AGGCCTGATT TAAGCCAATG CCGCCCTGTG 180  
 GTCTTTACCC ACGAATGGTG TGGAAATNA GAGCAGGGAA GAGGATTAC TCACTGGCTG 240  
 TGGAGTTAGG TCAGAAAGGG GNTGGAAAGA TGGAAACGTA TGGNTTTGGG GACATTTCTT 300  
 AATCTNTAGG CTTACCTTC CTTAAGTGA AATAAAAGCC N 341

SEQ ID NO:3628

SEQUENCE LENGTH:341

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04281

## SEQUENCE DESCRIPTION:

GATCGACCTG TCATGTTTTT AAGGTTATCC AGGCTGTATA TCTCTGGAAN AGAAGGGAAT 60  
 GGCAAAGAGT GGGAGTCTGA GTCAAGTTTG GTTTGNITT NNNAAGAGAC AAGGTCTCTG 120  
 TAATCCAGGC TGCAGTACAC TGGCATGNCC ATGGCTCACT ATAGACTTGG GCTCAGCCAA 180  
 TCTTCTGCC TCAGCCTCCT GAGTAGCTGG GNTTGGTTTT CCCAGGGCC ATATGTCAGC 240  
 TTATTTACCC TACTCACTTG GTGNTCCCA GNTGCCAGC CATGCTGTTT ATCCAGTATC 300

TTCTNNATGG GGATTACCTA TTAAGGGGAC TAACACAAAA N

341

SEQ ID NO:3629

SEQUENCE LENGTH:340

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04282

SEQUENCE DESCRIPTION:

GATCATGGAA CCCCTCTTCC GGCAGTTGGC CAAATGTGTC TCCAGCCCAT ACTTCCAGGT 60  
GGCAGAGCGA GCTCTCTATT ACTGGAATAA TGAATACATC ATGAGTTTAA TCAGTGACAA 120  
CGCAGCGAAG ATTCTGCCCN NNCATGTTTC CTTCCTTGTA CCGCAACTCA AAGACCCATT 180  
GGAAACAAGAC AATACATGGC TTGATATACA ACGCCCTGAA GCTCTTCATG GAGATGAACC 240  
AAAAGCTATT TGATGACTGT ACACAACAGT TCAANGCAGA GAAACTAAAA GAGTTGCTAN 300  
AANTGNAAGA NCGGGNNGAN GCATGGGTTA AATTAGAAAN 340

SEQ ID NO:3630

SEQUENCE LENGTH:339

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04284

SEQUENCE DESCRIPTION:

GATCTGCCAC ATGTNTGAGG GTTGCAGAGC CCGCTGTGGA GGTAAGATTG GAAACACATG 60  
NAGCAGAGGG AAGACATTGA AGAAAACATC TCTNCTGGAA TATTTGGAAA AGAACACTCT 120  
TCTGGACCTG GTTGAAGCAG GAAAGATGGA GGCAAAGTAG TGAAATAATC CAGAATTTCA 180  
ATGCTTTTNA ATGTNCTTAG TGATACTGAC CTGTGATAAT ATAATTCCCA GGGAGGACTG 240  
GGAACCTTAT CTCTTGAGAT ATTTGCATAA TTTATTAAAT TTAAGCCTCA TTCTCCTTTT 300  
GTNCATTTTG GTAATAAACT GGATTTGAAT TGTGAACAN 339

SEQ ID NO:3631

SEQUENCE LENGTH:339

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04285

SEQUENCE DESCRIPTION:

GATCCAGCCA GTATAGAACT AGCTCTGTAG GGGTGAGGAG GACTNTGCTA TGTATCATCC 60  
TNGATTGTNT TCCTTCAAGG AGCATTGCAC TTGCCTTCCC AGACCTTCCA CCTTAGGTTT 120  
TGCTGCAAAA AGCACCAGTG CTGAAGATGC TGCAAGACCA AATCATAGCT CATAAAATCA 180  
GGTCCTGAGA TAGTTACCCA TAAAGAGGAA TCCTTTGAGT GTATGCCATT GGTGAGCCGA 240  
TGAGCATGGA CCATAGAAGG GCTCAATGTA GANTGAAACT ACCCGTGTGT AAAAAGAAGN 300  
TTGGNTTAAA ATGGCTACTT TGGATGGGNA CCAGTGTCN 339

SEQ ID NO:3632

SEQUENCE LENGTH:337

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear



CLONE:HUMGS04286

SEQUENCE DESCRIPTION:

GATCAGAGGG GAAACAAACG CCAAGGGGTT GGGAAATGGGT CGGCATCTGG AGTCTGAGAC 60  
 AGCTGCCCTC CTGCGTCAAG GGCTGGGGGC CTCAGCTTCC ATCCTGTGCC AGCCTCCATG 120  
 TGGACAGCTC AGCTTATTGT CCACCACCTG GAAATNCCTC GAAGCTTCAT NNGTCCAGGT 180  
 CAAGAGAATC CTGTTCCAG ACCTCTGCCC AGCCAGGCCT TCCCAGCTCA GGGCTGACTC 240  
 CTGCACCAAG TGACGCACCT TTNATAACTG GTCTACCAAT GNCTCCCCTT CAAGTGAGAA 300  
 CTACCCTTTA CATTTAGGAG TGTGGCCCCG CAGTAAA 337

SEQ ID NO:3633

SEQUENCE LENGTH:337

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04287

SEQUENCE DESCRIPTION:

GATCCCTGTA TGCNGCCAAG GATGGGACTT CCAGCTAATG AATTTGTACA TGCAGCCAAA 60  
 TTTACAGGAA TTTTTTAA AGGCAGAAAA ACTTGAAATA CCAACATTCT GGCAAAAAAN 120  
 ANTCACTTTT ATGANGAGTA AGTGGAACCT GGGNTGCAGG ANCAAAAGAG GGAAATGTTG 180  
 GGCAACATT TTNNTGGGAG CTCCCTTCGC TGTGTGCAG CAGAAACAGA TTCTNAGTTC 240  
 ATTTTACTC CCACTGTATT ATAGTTTANC AAAANTNGTT TATATCTTGG AAAAAAANCT 300  
 TTCTGTTTAA AAAANTTAAN CAAGTGAATG TNGGAAN 337

SEQ ID NO:3634

SEQUENCE LENGTH:390

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04288

SEQUENCE DESCRIPTION:

GATCCCACTG ATTGGCCAGC CGAGCGAGAA CCAGGCTGCT GCATGGCACT GACCGCCGCT 60  
 TCCAGCTTCC TCTNAGCCGC AGGGCCTGCN ACGCGGGCAA GCGTGCTGCC TCTNTNCTGT 120  
 GTCGTTTTGT TGCCAAGGCA GAATGAAAAG TCCTTAACCG TGGACTCTTC CTTTATCCCC 180  
 TCCTTTACCC CACATATGCA ATGACTTTNA ATTTNACTN TTGTAGTTTA ATCCTTTGTA 240  
 TTACANCATG AAATATAGTT GCATATATGG ACACCGACTT GGGAGGACAG GTCCTGATTG 300  
 TCCTTCTCC AGTGATCATG TTTTACTCAC ANATAANATT NTTTCAGCAA GTAAAGNNGG 360  
 ANNGGGTTTT GGTNGNGNGG NGTGNGGTGN 390

SEQ ID NO:3635

SEQUENCE LENGTH:73

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04289

SEQUENCE DESCRIPTION:

GATCTGGCCA TTTGGTACAT AATCCAGCAC AGATAAGCTG GGTGGTAATG ATAATAAAA 60  
 TGGTTTTCTC AAA 73

SEQ ID NO:3636

SEQUENCE LENGTH:328

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04290

SEQUENCE DESCRIPTION:

GATCACCTGG GTTCTTTAT TTATCGACTG TGTCATGACA AGGAACTTA CAAACTGCAA 60  
CGCAGAGAAA CTATTAAAGG TATTCAGAAA CGTGAAGCCA GCAATTGTTT CGCAATTCGG 120  
CATTTTGAAA ACAAATTTGC CGTGGAACT TTAATTTGTN CTTGAACAGT CAAGAAAAAC 180  
ATTATTGAGG AAAATTAATA TCACAGCATA ACCCCACCCT TTACATTTTG TGCAGTGATT 240  
ATTTTAAAA GTCTTCTTTC ATGTAAGTAG CAAACAGGGC TTTACTATCT TTNCATCTCA 300  
TTAATTCAAT TAAAACCATT ACCTTAAA 328

SEQ ID NO:3637

SEQUENCE LENGTH:328

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04291

SEQUENCE DESCRIPTION:

GATCCTGTGA ACCGTIACTT TGCCTAAATC ACTTGAGACT TGAGTNTTTA ATAACAAAGC 60  
ATCAATATTC ACTAAAGTCA ATCTNTTTTN ANTTCTGTN ACTTGGCTAG AAGCTCTTGA 120  
CACTAAGGGA TTAGTGTTAA TTTCCCTGG GGGTGTTCCTA CTAGGGCATT ACTGTATAAT 180  
GACTTGATGT TGCCACATAG ACTTCAAGAT ATATAATATT TTNAGGATTT TTTGATTGG 240  
CCTATGTTTT ATTGCATAGT GTGAACCGTG TAAAGCTTGG TTAACCTGTA TATAGATAGC 300  
TTATTGTTGA CTAGTTATAG TGTATTN 328

SEQ ID NO:3638

SEQUENCE LENGTH:326

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04292

SEQUENCE DESCRIPTION:

GATCCTTTCC CTGGATACAT AACCCTAGTA GATAATGTTA CTGCAAGATG TAATGNCCAA 60  
ATCCAACCTA CTGCAATNT TACTATGGAA ATCTCAATGC AAAAGTAGCC TTTGTNATTT 120  
TTTTTTTAAA CCGTCTCCAT AACAGANCAC TTAGAATTAT TAGCCATTTG CTGCAAAGTA 180  
TTTGTTTTAA AATGTCTGGC ATATACACCA CTAACATTTA ANTGCCCAAC ATTCGGTCTA 240  
TACGTGAAAA ACCTAGANGA AANGCCCTGT TGGAGTTTTG ATGTAGAGTG CAATANTACA 300  
TCAATAAAGG TATTTTAAAA TGGAAA 326

SEQ ID NO:3639

SEQUENCE LENGTH:326

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04293

SEQUENCE DESCRIPTION:

GATCTGTTGT ATGTAATAAG TAACACAGAG TTTTAAAACA AATTAATTAT TTAGCTTTAT 60  
 TGAAGTTTGT NTTTTNCCTT CCGAACCTGG AGTATCATAT TATAAACAGC AGTTTCACAC 120  
 CAGAATAGCA GTGCCCTTNC TTTTGTACA TACTGATTGG NCCTTTCTTT ACTGTTACGT 180  
 5 GGACACTTTC TATGTTAGTT TTGATGCATA ATTCTTTGAA TCCTTTTATA CAAACTAGAA 240  
 TGTATGTGTA AGAATACCTG TCCCTGCAAT GTAGTAACTA CAAACTTATT TTTAAATAAA 300  
 TAGAAAACTT GTTTTCTAA GCTAAA 326

SEQ ID NO:3640  
 SEQUENCE LENGTH:325  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04294

SEQUENCE DESCRIPTION:  
 GATCCAAGAG TTTAGTGATT TCAAAAGCCT TGGTCTCAGG AGAAGATTAA ACTTTCATAT 60  
 TGGGCAGTGG TTCACTTTAA AACACACACA TACACACACA AAACAATTTT TTAAGAAATC 120  
 CTAATAAGTA ACATACCCAA AATGCTCTGT CTTGAGTCAT GAGAACCATC AGTTCTTGAT 180  
 20 ATTGTCTAGA CTTGCATCTA GAGCTACGTT GTAAAATTCT TTTAGGCATG TGTTAGATT 240  
 CTGTGTAAC TTTGTTTAAA TGTAAACTTC ATACTACATT GTCAGTTTTT GTCTTAATAA 300  
 AACTATAGAT TTATAATCCC TGAAG 325

SEQ ID NO:3641  
 SEQUENCE LENGTH:391  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04295

SEQUENCE DESCRIPTION:  
 GATCGGAATT TCCACCAATC AGCGGGAAGC CTCGGCCCTG TAACTGCTAA TGGGAGACAG 60  
 CAGCGCCACG CCACAGGCTT TTCCCTTGGT TTCGGGAGGG NTGGGGAGCC AGGTGGGGCT 120  
 CCCGNCAGA CCCTTCCCG AGGTCCGNCC TCTCCGCCTT NCTNTAAAT TCCTCTTTTG 180  
 AGTNCCTCC CTTCCGGTTG AGAGGCGGGG GTTGGCCCGT AGTTGTACAC TCAGTCACCC 240  
 35 TGAAGTGTGG AGGNGGNGGG NCTCCNTTGT GGAAGTATT GCGTGGGAT TTGGTNTGTT 300  
 TTATTAAGGG ATTTGAAAAA ATTCAGATGG ACTTNACTAG TATGGACTGT TNGGGTAAAT 360  
 ATNGCTTNC NGGGTTAATA AAATGGACAG N 391

SEQ ID NO:3642  
 SEQUENCE LENGTH:324  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04296

SEQUENCE DESCRIPTION:  
 GATCCAGTCA ATACATGCAG ACCAGTAAAA TCTGATTGT GCAGAGTTCT CCATCTGACT 60  
 CTCACCTATT TCTGTAGATA TATACATATA TAAATACAAG TATGTNCTTA CGGCACAGTA 120  
 TTGCTGACCT TTAGTTCGAG GTTTGTGCGG TTGTTGTTA TTTTCTTCCT CTTGCAAGTG 180  
 50 CTATCCATGT GAGTGTGTGA AGTTTCTCTA ATAAGTAAAA CACAGGCCCT TTTCTTGT 240  
 TGTTTTGTGT TAGTTATTG TAAACAGCCA TTTGTTGTAA ATNATTATTG GCATTAAATT 300

ATAATTTATG ATTTTCAAAG CAAA

324

SEQ ID NO:3643

SEQUENCE LENGTH:323

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04297

SEQUENCE DESCRIPTION:

5 GATCCAGTCT AGGCCCGTAT GTTGCAATTT GCTGTCATGT CTTCTTAGTC TCCATCNCAT 60  
 CTCAGTGGTC TTTTCTTTTC CATGACTGTG ACAGAAATGA TTTGTATCCT TCATATATCT 120  
 GCAGTCACAT GAAGTCTATT TGTCCCACTA CTGGTGACGT AAATTTTGGT AACTTGGTTG 180  
 AGGGTGGTAC CGTCTAGGTT TCTCCATATT AAGTTGCTAT TTTNCCTTGT GTATTTAATA 240  
 15 AGTATCTTAT AGGGAAATCC TTTGAGACTA TGTAATATC ATATTACATG TATTTNGCCT 300  
 GTTTTAGCAT CTTTGAAGA TAN 323

SEQ ID NO:3644

SEQUENCE LENGTH:320

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04298

SEQUENCE DESCRIPTION:

20 GATCTGGAGC ACAAGGAACT CCCATACATT CCTAGTGGGA ATGCCTAATG TTAGAGTCTG 60  
 GAAGACATTT TGGCAATTNC TTAACCAAGC TCTTCTTACC ATAAGATGAA GCAACTCCAC 120  
 ACCTTGGTAT TTACCCAAAC GAGTTGAAAG CTTATGCCCA TACAAACACC TGTACAAGAA 180  
 TGTCTATAGC AGCTTTATTC ATAATTGCCA AANCTTGAGG GCATCCAAGA TATCACTTAA 240  
 30 TGGGTGGACA GATAAGCTGT GGTACATCTA TACAATGGAA TATTAAGGTG CTA AAAAGAA 300  
 ATGAGCTCTG AAGCCACAAA 320

SEQ ID NO:3645

SEQUENCE LENGTH:319

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04299

SEQUENCE DESCRIPTION:

35 GATCGGGATT AATATTAGTG CATTTTAAAA AACTTAAAA GTTTTACAAN TGTATTTGTG 60  
 TATTTCTGT TTTGGTGCCT GTTTTATAGA AGATGATTGA NGAATCACTG AAGATTAAAA 120  
 TAAAAAGGA ATTAGAAATG GAAATGNAT TAGAAATGAG TAATCAAGAA ATAAAAGACA 180  
 AATCTGCTCA CAGTGAAAAT CCTTTAGAGA AATACATGAA AATCATCCAG CAGGAGCAAG 240  
 45 ACCAGGAGTC GGCAGATAAG AGCTCAAANN NGATGGTCCA AGAAGGCTCC CTAGTGGACA 300  
 CGCTGCAATC TAGTGACAN 319

SEQ ID NO:3646

SEQUENCE LENGTH:318

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04300

SEQUENCE DESCRIPTION:

GATCATAGAA GAAGAANCCA GTAATTGANC AAATCCTATT TAATGACATC CTTGTAGCAT 60  
 AGATGGTCTA TAATGCTGAC CACAGATTTC TTAGAAATGC TGCTCTCTCT ATTTAACTAA 120  
 CATTTTGTNC AGTTTTCCT CCAAGTGAAG CAGAAAGGGT TTTNCAGCT GTTAAATCCT 180  
 AAAANTCAAT ATAATTNATT TATGTAAGAA AAATAACTCA ATCAATATAT TTTGAACCT 240  
 TTTAAGTACT AATTNNNTNT TTATCAAGTA GAAAAAAAT GTATTGCCC TAAATCCTTA 300  
 AAATACAAAT GCTATAAA 318

SEQ ID NO:3647

SEQUENCE LENGTH:317

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04302

SEQUENCE DESCRIPTION:

GATCCTGAGG CTTTGGCTGA AATTCTGCTT GAAACTTGTA AATCAATCAC ATATTCTTTA 60  
 GAAAATAAGA CCTACTCATC TGTGAGAACA GAAGCTTTAT CTGTGATAGA ATTGCTGCTT 120  
 AAAAACTTG AAGAATCTAA ACAGTGGGAA TGTTTGACAT CTGAATGCAG AGTGCTCCTA 180  
 ATTGAGTCTT TAGCTACTAT GGAGCCAGAC AGCAGACCTG AACTGCAGGA GAAAGCAGCG 240  
 TTACTGAAGA AAACACTTGA AAATCTGGAA TAANTTAGAN GGGGAAGAAA CAAACAAGTG 300  
 CCATGTTTAT TGGGGG 317

SEQ ID NO:3648

SEQUENCE LENGTH:317

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04303

SEQUENCE DESCRIPTION:

GATCCTTCTC CTTCCCTGGG ATACAGCACC TCCACCCTGC CAGGCCACCC NTGTAAAGGC 60  
 AGCCAATICA GAGCCACCTC TTATGCCTGC ATCTCCCCCA ACAATTCCTG CTGGGAAACC 120  
 ACTCCTCGTA TGGTGTATC TACACCAGTG GGTTCAGC TTGAGAAGAA TCAAGTTCTA 180  
 CAGGGCTGCT TAAACACAG GTTGCTGGGT CCTGTNTCTC AGAGTTTTTG ACTCAGTCTT 240  
 GGTGAGAAT TTTCAGTTCT AGAAGCTCCT GGGTAATGCT AATCCTCCTG TTCTAGGGGC 300  
 CATAGTCATT GTCCATN 317

SEQ ID NO:3649

SEQUENCE LENGTH:317

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04304

SEQUENCE DESCRIPTION:

GATCTACAG CGGCTGGCCA CCATCTACCA CAACTNCCTC CTGGACCGTG AGAAGTCGCT 60  
 CTTNTTCTAC CAGAAGGCCA GGACCTTCGC CACAGAGCTC AACGTCCGCA GGGTCAACCT 120  
 GCCTCCTCTG CCACTCTGCG GTTGGGCCCC CTGGTTGGCC CCCAGCCACC CTNGCTGAGG 180  
 ACAGCATCCA AGGGAGTGGG TTTTGTGCAA GGGCTAGGGG TCTCCTGCCT NTCCTGGTGT 240

CGNCGGTGGC TCATTTTCTN GCAAATNGAG GCACGAACGC AGGGNCCAAA TAGCAATAAA 300  
TGGGTTTTGT TTTTAAA 317

5 SEQ ID NO:3650  
SEQUENCE LENGTH:317  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
10 CLONE:HUMGS04305

## SEQUENCE DESCRIPTION:

GATCTATGCA ATTTTAAAC TAGTAATGGG CCAATTAATAA TATATATAAA TATATATNTT 60  
NCAACCAGCA TTTTACTACT TGTTACCTTT CCCATGCTGA ATTATTTTGT TGTGATTTTG 120  
TACAGANTTT TTAATGACTT TTTATAATGT GGATTTCTTA TTTTAAAACC ATGCAGCTTC 180  
15 ATCAATTTTT ATACATATCA GAAANGNNGG ANTTATATCT AATTATACA AAATAATTTA 240  
ACTAATTTAA ACCAGCAGAA ANGTGCTTAG GAAAGTTATT GTGTTGCCTT AGCACTTCTT 300  
TCCTCTCCAA TTGTAAA 317

20 SEQ ID NO:3651  
SEQUENCE LENGTH:316  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS04306

## SEQUENCE DESCRIPTION:

GATCTGAATT CTAAAGCGTC TTTCATTGTT TACTTTTAGG ATGAGGAAGT ACAGACAATT 60  
GGTCAGATAG AACTGTGCCT CACTAAGCAA GACCAGCAGC TGCAAACTG CACCGAGCCG 120  
GGGGAGCAGC CGTCCCCCAA GCAGGNNGTC TGGCTGGCAA ATGGGGCCGC CGAGAGCCGG 180  
30 GGTCTGAGAG TCTGTGAAGA TGGCCAGTC TTCTATCCCC CACCTAAAAA GACCAAGCAT 240  
TGATGCCCAA GTTTTGGAAA TATTCTGTTT TAAAAAGCAA GAGAAATTCA CAACTGCAG 300  
CTTTCTAAAA AACAAA 316

35 SEQ ID NO:3652  
SEQUENCE LENGTH:374  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS04307

## SEQUENCE DESCRIPTION:

GATCCTTGGG TTGTAAAGAG AGTAGAAACC CTAGGNAGCA GTGCTTTTGG GTCCTAGAAC 60  
CTGTTGAGTT TCTAATGAAT ATTTGTAGAA TCTNATAAAA CAGTTTAAAT ACAAGCTTAA 120  
GTGGCTTATG AATCCTGTNA AGCTCATTTA TGGNCTAGTG TAAAACAATG TGAAGCTCTA 180  
45 CTAAGTNCTG TCCTTAATCA TAAATAATAG CCCCTTGNGG NCTAGCCTGT CCTCTGGTCA 240  
CCTTACCAGT TGGGTTGCAC ATTGTGTGGT CGTCCAATTA AACTCAATCT TNCGTGTGNC 300  
AGGNGNTAGT CTNTCCAATC ATGNCATAGN TTTCATCTGG TTTTGNCTG GTGGACGNAC 360  
CTTCGGANTA ANTN 374

50 SEQ ID NO:3653  
SEQUENCE LENGTH:316

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04308

SEQUENCE DESCRIPTION:

GATCAGGACC AACCTGGAAA ATGCCAGATT TGGCTATGCT TTTTAANACA TTNATTTGGA 60  
 CAGCTCACCA ACCCCTGAAG GGGCCGTAA GCCTGGTTAG TTTNTACCT ACTCCGAGTN 120  
 TCCTCCCCTG CCCCACCAGA TTGCTGCAGG GGCCTGGNAGC CAAATTNTTG 180  
 ACACTTCTTT TTTCTATGC ACTGGTTTCA CACAGCTGTN ATTTTNTTT CAAAATTGCA 240  
 GCAGTCCCAC AAGATGTNTG CATTTGGACA AATAGTACTT AAAACAAAN CAAACAAGCA 300  
 CTCAGCCCAG TTCCTN 316

SEQ ID NO:3654

SEQUENCE LENGTH:315

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04309

SEQUENCE DESCRIPTION:

GATCTAATGC AGAACTATC AGATATTGTG AAAAATCAGT GTGGGAGGTA TTCAGTCAAA 60  
 AGTCAGAAGG AAATGTATTA TCGTTATAAT TTCAAACCTT AAGAAAGCCT AAATTACCAA 120  
 TTGCATATCA AATTTTTTTG ATAATGTAAG GAAAACTTAA ATCCCCTCCA TATCCTAATT 180  
 GGCATTATA ATAATATGAC ACTTAACCTT GACAGCTAGA GTCTTACTTT ATGCTAATGC 240  
 TAGATATCTA TTTTNAANTT CCACGTGTGT AAACATGCTA TACTCTTCTG ATATTAANCT 300  
 TACTAAGTAC ATAAA 315

SEQ ID NO:3655

SEQUENCE LENGTH:315

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04310

SEQUENCE DESCRIPTION:

GATCCAAGAA GAACTAGAAA AAAAGTTGTT TGCAGGCTTG CAACCTCTCA NAAATTTTAA 60  
 GGCTAGCTCT TCAACTATGT CTTTNAAAAA GAATATGTCT GCCCACAGCA GCCAGAAGTG 120  
 ACAGCATTCT TGTGAATGTT TACATCCTGC TGCTGATAGG TTCAAGGAAT TCTTTAAACC 180  
 AGATTCTGCT GACATGAGAA GCTCCAGTGA TTTGTTTTTT TGAAGGCTG TATCAGAGCA 240  
 AGCCTAACAT CTAAATAANG TTTGATTCTG GATTTTCCAG GTGGGAAATA AATAAGAAA 300  
 ATTTGGCTTG TCAAA 315

SEQ ID NO:3656

SEQUENCE LENGTH:347

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04311

SEQUENCE DESCRIPTION:

GATCCGTGCC CGCNTCCAGG AGAAGTTGTC ACCTCCCTAC AGCTCCCCAC AGGAGTTTGC 60  
 CCAGGATGTG GGCCGCATGT TCAAGCAATT CAACAAGTTA ACTGAGGACA AGGCAGACGT 120

EP 0 679 716 A1

GCAGTCCATC ATCGGCCTGC AGCGCTTNTT NGAGACGCGC ATGAACGAGG CCTTCGGTGA 180  
 CACCAAGTTC TCTGCTGTGC TGGTGGAGCC CCCGCCGATG AGCCTGNCTG GTGCTGGCCT 240  
 GANTTCCCAG GAGCTGTCTG GTGGCCCTGG TGATGGNCCC TNAGGCTGGG GGGCCCATGG 300  
 TCAGCCCAGN NTGGGTTCTG TTCTNTGGNN CTTGTCANNC NNAANCN 347

SEQ ID NO:3657  
 SEQUENCE LENGTH:313  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04312  
 SEQUENCE DESCRIPTION:

GATCATAACT GAACCAGAAT TTGGATTATA GANGTGCACT TCCTAGCTGT TTTTATTATA 60  
 GGTATAGGAA CACACAATGA GAACCTTATG TTTAGAATGT AGCAGTAACA ACAGAGGGTA 120  
 ACTACACTGC AAGACTTAAA TGGTTTGAGC ATGTGACACT ATCCTTTTGT TGGGGGGAGC 180  
 AGGGTATAAN ANTATACATA CAGGAGATTA GTTAAATAGT AAAGTTTTAT ATGTATGTTT 240  
 AACTTCCATG ATATTTATNA TTTNGTAGAG ACATTGTGA TTGTNTAGAG TTCTNGTNTT 300  
 TTTTCTATTT ATN 313

SEQ ID NO:3658  
 SEQUENCE LENGTH:307  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04313  
 SEQUENCE DESCRIPTION:

GATCTTAAAA GTGGAAAGCA GAAAAAATAC TGTTTCCTGA AATTNAAAAG TTTTGGCAGT 60  
 GCCCAGCAGG CCCTCAACAT TCTCACAGGC AAGGACTGGA AGCTGAAAGG CAGGCATGCC 120  
 CTAACCCCA GGCACGTCCA TGCCTGGNTC AGAGGCTTAC CACCTGANTC AACAAGGCTC 180  
 CCAGGGCTTC GTGTTGTACC TCCCCCTTT GAACAGGAGG TCTGCAGAC TCTGAAACTG 240  
 GACCACCCGA AGATAGCAGC CTGGCGCTGG ANGCCGGAAG ATTGGAAGC TCTACAACAG 300  
 TTTGTGN 307

SEQ ID NO:3659  
 SEQUENCE LENGTH:306  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04314  
 SEQUENCE DESCRIPTION:

GATCCCCAGA GAGGTGGCCC TGGACCTGGA GTCAGGAGGC GGTGTCCAGA AGAGTCGCTC 60  
 ATCAACCCCG GGTTCAGAG TAAGAAACCA GCTGGTGGCG TGGACTTCGA TGAGACCTGA 120  
 AGGTGCAGCA CAAGCGTGGC CCCGCCGGGA GTCCGCCTAT NAGGGGAGAG GCAGTCTTTG 180  
 AGGCCCCCAT CAGAGACCCC CCGCCACCAC CTCCACCTGC CTGTCCTGGG CCAGGACTAA 240  
 CACGGCTCCT CAAATTCCTT CCCTGTCAAA TAAACAGCTC CCTTGGTTGG AGGCTCTNGT 300  
 GGGAAA 306

SEQ ID NO:3660



EP 0 679 716 A1

SEQUENCE LENGTH:371

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04315

SEQUENCE DESCRIPTION:

GATCCCTGA GCAAGTCAGA AGTACTCTC ATCAGTCGTT CATGGTCACA ACCTGAGGTA 60  
CTCTGCTGAG TGGGCAAGGC TGAAGAAGAG GCCTGTGGAA TGCAGCATT A CTGCTGGAC 120  
AGAGCAGGGC AGGCAGTTCT ATGCCCTTGA GCTCCTGACT GCAGGGACTC TGTCCCCACA 180  
CTCAGAAAGA CTCAGCTCAC TCAATGAGAG AATGTGATTT ACTTTATAGA ACGTATAATC 240  
AACTTTGTTG AATAATTTGT TCTATTAAGG CTGTCTAAAG TATGTNATGT CTTATCATA 300  
GTATGAAGTG TTGAAAATTA ATAACGGGCC TAGTTTAGGA AAAAGCTGCT TAAANGNGTG 360  
TGGCCCGTAN N 371

SEQ ID NO:3661

SEQUENCE LENGTH:304

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04316

SEQUENCE DESCRIPTION:

GATCTGTATT GATATTTGAT AGTGAAAATG TTTATTCAAT TTTTCCCCAA AATGTATTTG 60  
TTCTCTTAC TTGTTTATTC AGCTGTGGTG ACTTCAAAAT ACTTTTCCA GGTGACAAAA 120  
AAAAACTCAG AAAAATTTTT AATCTTAATT GCATTAATAC TATAAATTGA TTTGGAAGGA 180  
TTTAACATTT TATAATATNG GNNTTCTCT GCAGTAATGT GGCATATTCT TCCNNNGTT 240  
CAAGCATTAA AAAAATCTCT TAGCAAAGCT GCACAGCCTT CTTATAAGG GTTCTCTATA 300  
TTTN 304

SEQ ID NO:3662

SEQUENCE LENGTH:303

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04317

SEQUENCE DESCRIPTION:

GATCTGCGGT GGGCCAAGAG TATCCAGGGA GAAACCTGTC CCTGGCAGGG CTGGAGCAGG 60  
GACACTCCAG GCCCAGCTGA GGCTTCCTGC TCTGCATGGC AGGGGACATC TCTNACCTGG 120  
TCAGGACCCT GGAGGTGGGA CAGCTGGTGC TAAGGGAATG TNAGCGCATC AGGGTTGGGG 180  
AGAAGCAGTG GGTGGTCCAG GAAACCCCTG AAACAGCTGG CCCTGGGGTC CCCTTTCAAG 240  
TGTTTCCAGT TGTGGCAAGG GGTCAAGGAG ACCTTGCAAT GCAAATCTNT TAGAAAAAAC 300  
AAN 303

SEQ ID NO:3663

SEQUENCE LENGTH:302

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04318

SEQUENCE DESCRIPTION:

EP 0 679 716 A1

GATCTGAAAG ATTACATTTA GAACATTTAG TACTATTACA CTCTCAGAAA .CTGTNGTAAA 60  
 AAGTCACATT TTCAAAACTT CATGCATATT GTATTCTTGT TGGAAATAAG TCCTATAGTT 120  
 TCTTAATTGT CTTTCATGCCG TCCATATTTA ACAAACATTG CAAGTCCTTT TTATATTTGG 180  
 5 GTAATNATTT GTAATTTAGT GAAGGAGACT AGGGGATGTT TTCTTCCAAA GGGAATTTAA 240  
 AATCAATTTT ATGGTATTTT GAAAGTAAAA TACTCCTTAA CGTGTCAATA TTTTAAAAAT 300  
 GN 302

SEQ ID NO:3664  
 SEQUENCE LENGTH:301  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04319

SEQUENCE DESCRIPTION:  
 GATCCTCTCA GAGTGCCAGG CATCCCCCCC GNACCAGCAG AGGCTCATCT TTATNAGGCA 60  
 AGCAGCTGGA AGATGGCCCG ACTCTTTNTG ACTACAACAT CCAGAAAGAG TCGACCCTGC 120  
 ACCTGGTCCT GCGCCTGAGG GGTGGCTGTT AATTNTTCAG TCATGGCATT CGCAGTGGCC 180  
 20 AGTGATGGCA TTA CTCTGCA CTATAGCCAT TTGCCCAAC TTAAGTTTAG AAATTACANG 240  
 TTTCAGTAAT AGCTGNACCT GTTCAAANTG TTTAATAAAN GGTTCGGTT GCATGGGTAA 300  
 A 301

SEQ ID NO:3665  
 SEQUENCE LENGTH:300  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04320

SEQUENCE DESCRIPTION:  
 GATCTGAAAA ATGAAGTTTG GTATCAAAAA NGTCATGACC CTGTATGTAA AGCAGAAAAC 60  
 TTCAAATCTG ACTGTTTCCC ATTACCTGCT GAAGTATGTC TCCTGTTTCT TTTCAAAGAG 120  
 GAAGANGAGT TTACAACAGA TGANGCAGAT GAAACTAGGA GCAATGAAAC CCAGAATCCT 180  
 35 CATAAACCAT CACCTAGCAG GCTGTCAACA GGTGCATCTN CTGATGCTGT CTGGGNTAAT 240  
 GGCATTGATG ATGCTTATTT TTTAGAAGCT ACTGAAGATG CTGAATTAGC TGAAGCTGCN 300

SEQ ID NO:3666  
 SEQUENCE LENGTH:300  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04321

SEQUENCE DESCRIPTION:  
 GATCACTNAA TGGTCAAGTG GAACAAGCAC TACACGACTA ACCCCTATTG GGGTTTTTAA 60  
 CTTAAGGGAG GCTAATTTTT AATTTAACT GCTCGAGATA TGAGTTCTGC AAAAGGTGGT 120  
 CCGCATCCTT GGGCCTCTGG ACATTATCAC TAAATTGCTT GTGCCTGTTA ACAAGAATAC 180  
 TGACCAGAAT GCTCTTCATG TAGCTTATAC AGTTGGTTCA CTTTCATGCGG TTCTTGACAT 240  
 50 GTTTATTCT ACCCTTAATG CAATGAAATG TTTCATTAAT AAAAAACCAC TTTATATAAA 300

SEQ ID NO:3667

SEQUENCE LENGTH:417

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04322

SEQUENCE DESCRIPTION:

GATCTTTCTG GCTCCACTCA GTGTCTAAGG CACCCTGCTT CCTTTGCTTG CATCCACAG 60  
 ACTATTTCCC TCATCCTATT TACTGCAGCA AATCTCTCCT TAGTTGATGA GACTGTGTTT 120  
 ATCTCCCTTT AAAACCCCTAC CTATCCTGAA TGGTCTGTCA TTGTCTGCCT TAAAAATCCT 180  
 TCCTCTTTCT TCCTCCTCTA TTCTCTAAAT AATGATGGGG CTAAGTTATA CCCAAAGCTC 240  
 ACTTTACAAA ATATTTCTCTC AGTACTTTGC AGAAAACACC AAACAAAAAT GCCATTTTAA 300  
 AAAAGGTGTA TTTTCTTTT TAGAATGTAA GCTCCTCANG AGCAGGGACA ATGTTTTCTG 360  
 TATGTTCTAT TGTGCCTAGT AACTGTAAA TGCTCAATAA ATATTGATGA TGGGAAA 417

SEQ ID NO:3668

SEQUENCE LENGTH:298

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04323

SEQUENCE DESCRIPTION:

GATCTCTGAA AGCTCAAATG GATGGAATTT AGTTTGCGGG AAAGAGGCTT TGCTTTGCGC 60  
 ATATCAGGCT TAGGACTGTG GGAGGCTTAA GAAGCAGATG CTTCTTTNAT TGTACTCTTG 120  
 TNCTGCCCTT GTTTTTGAA GGCTCTGACT TATAACTNCT GTATCAGAAG AACATTTTG 180  
 ACAGTGTCTT GGTGGAGAT GAACATCCCT AATTGACATG TGATGACTAT TTCTNATTCC 240  
 ATTACTCTAA GAGTCATTGA AATTTTGTTT TGCTTGTTG TTTAGCTTCA AGGTCTTN 298

SEQ ID NO:3669

SEQUENCE LENGTH:294

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04324

SEQUENCE DESCRIPTION:

GATCATCTCT ATATCTAATT TGTATTATNA CTAATCTTAT TCCAACTATT TNCTTTATNA 60  
 TACTGAAACA GTTTGTNCCT TCAGTCTCTG CTTGGGCTAC CTAAGGGA AGGGCCCCCT 120  
 ATCCTGTAAT CACATGACTT ACTTCACCTT GTCAATCACT GAGAAGATTC ACCCTCCTTA 180  
 CCCTGCCCCC TTGTCTTGTA TGCAATAAAT ACCAGTGGGC CTAGCCCTCT GGGACCACTA 240  
 CCGGTCCCGG GGTCTTGATG GTAGTGGNCC CANAGCCCAG CTTGCNTNCN CAAA 294

SEQ ID NO:3670

SEQUENCE LENGTH:293

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04325

SEQUENCE DESCRIPTION:

GATCAAGAGG CCACCAGTTG TACTTCAGCA CCAATGTGTC TTACTTTATA GAAATGTTGT 60  
 TAATGTATTA ATGATGTTAT TAAATACTGT NCAAGAAGAA CAAAGTTTAT GCAGCTACTG 120

EP 0 679 716 A1

TCCAAACTCA AAGTGGCAGC CAGTTGGTTT TGATAGGTTG CCTTTTGGAG ATTTCTATTA 180  
CTGCCCTTTNN NTNCTNACTG TTTTATTACA AACTTACAAA AATATGTATA ACCCTGTTTT 240  
ATACAANCTN GTTCGTAAT AAAACTTNTC CCTTTTTTTA AAATGNAANT AAA 293

SEQ ID NO:3671

SEQUENCE LENGTH:292

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04326

SEQUENCE DESCRIPTION:

GATCTATAGT ATTTTAATGT GCATCTACTT TAAATNAGTC ATCTTGGGGT TTNATAATT 60  
CCCTTATGTT CTGCCCCCTC TACACTTGAA ATAACAAAAT GCCTTAATTT TATGGATTAG 120  
TTCTCTTATA GTAGACAGGC AGCTATATGC AGCAAAACCA ATAAAGTTAT TTTCAACTT 180  
TCATAGTTGT AAAATATCTT ATAACAGAAT ACAAACAGC TANGAAAACA TGCCACATT 240  
NATTTNGCA TTTTCAAATA ATTNGTTTTT GGTGTAAGCA CAGGATAAAA AN 292

SEQ ID NO:3672

SEQUENCE LENGTH:291

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04327

SEQUENCE DESCRIPTION:

GATCAAGGAT GCAACCTCAG GTTGAGAAAG AAACAGGGTT CCCTGGGCCC ATTAGACTGT 60  
TTGCAGGGCA TCACTGCTTC CCCCTGACAC CTCACAATA GCAAAAATTG TCTTTGTCTT 120  
TGGAATNAT AGAGGGATT GGTATCCAG ATTGTGCAGA TGCAAACTTA GGCTGTCTTG 180  
ATGNNNACTT AGAACCACAG AAATGCTTTT AAAATGCCTG TTTTAAGATG GAATTGTTGT 240  
TTTNATAATT TGATTTTAGT GCTAAATAAA TGATTGGCTT TGTACATGAA A 291

SEQ ID NO:3673

SEQUENCE LENGTH:291

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04328

SEQUENCE DESCRIPTION:

GATCTAAAGG CTCTGGNTTT GCCTTCTTTC AGTCTGACAC TGACTAACAA CCTCGACAAG 60  
GTGGGCATAT ACCTGGATTA TGAAGGAGGA CAGTTGTCCT TCTACAATGC TAAAACCATG 120  
ACTCACATTT ACACCTTCAG TAACACTTTC ATGGAGAAAC TTTATCCCTA CTCTGCCCC 180  
TGCCTTAATG ATGGTGGAGA GAATAAGAA CCATTGCACA TCTTACATCC ACAGTAATGA 240  
GTCATAATAT TATACAAATT CAGAGTGTTA TTAAAGAGGT TTTGAAATAA A 291

SEQ ID NO:3674

SEQUENCE LENGTH:290

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04329

## SEQUENCE DESCRIPTION:

GATCCCAAAA GCTGTTTTNA GGTATAAGGA CAAGGAGAGG AGACAAGTGA CGACAGCCAT 60  
 TCCCCTTTGC AGCTATCTAC TGTAGTGACA GCCATTCTT GGTGATGGG TTGGAAGTCA 120  
 TCAGAGGTTT GAAGAATTAC ACTGGCCTTT GTTTTCNNG AAATGCCGAC CATGGAGATG 180  
 CTTTAGAGTC TTCTCAAATA GCTTAGATGT TGTAAATGNGG TTAAGCTTTG CTTCATAAAA 240  
 CAGGGGCCCT CAGAAGTTCT CCTTTAAAT TTTCAATAA AAAATTTAAA 290

SEQ ID NO:3675

SEQUENCE LENGTH:288

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04330

## SEQUENCE DESCRIPTION:

GATCTATCCC TGTCTACTG AAAGCCCCTG TGTAGTGTCT GTGTTGTTT CCCTTGACCC 60  
 TGGNNTTCC TATCCTCCCA AAGACTCAGC TCCCCTGTTA GATNGCTCTG CCTGTCCTC 120  
 CCCAGTCACC AGGGTGGGGG GGACAGGGNN AGCTGAGTGC ATTCATTTT TGCTTTTCTT 180  
 GTGGGCTTTC TGCTTAGTCT GAAAGGTGTG TGGCATTCTG GGCAATCCTG TAACCTCAAC 240  
 ATAGATTTT TTTGTGTGTG TGGAAATAAA TCTGCAATTG GAAACAAA 288

SEQ ID NO:3676

SEQUENCE LENGTH:285

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04331

## SEQUENCE DESCRIPTION:

GATCAACCCC TGACCTAATC GGTATGTTA TCTACAGATT ACAGACATTG TATAGAAATG 60  
 CACTGTGAAA ATCCCTATCC TGTTTTGTTC TAATCTAACT ACCGGTGCAT GCAGCCCCCA 120  
 GTCATGTACC CCCTGCTTGC TCAATCAATC ATGACCCTCT CACACACATC CCCTTAGAGT 180  
 TGTGAACCTT TAAAAGGGAC AGGAATTGCT CACTTGGGGA GCTCAGCTCT TGAGACAGGA 240  
 GTCTTGCCAA TGCCCCCTGGC TGAATAAACC CCTTCCTTCT TTAAG 285

SEQ ID NO:3677

SEQUENCE LENGTH:285

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04332

## SEQUENCE DESCRIPTION:

GATCACAAAA ATGGAACCCC CTGTTTCATG CTTCTACAGT CCAGCCAGCC AATCTGAAGA 60  
 TGTCATTCTT ATAAAAAGT ATGACCAAAT GGCTATCTNC CACTGTTTAT NTTGGCCTTC 120  
 ACTGACTCTG CTAGGTGGTG CCCTGATTGT TGGCATGGTG AGATTAACAC AACACCTGTC 180  
 CTTACTGTGT GAAAAATATA GCACTGTAGT CAGAGATGAG GTAGGTGGAA AAGTACCTCA 240  
 TATAGAGCAG CATCAGTTCA AACTGTGCAT TATGAGGAGG AGCAN 285

SEQ ID NO:3678

SEQUENCE LENGTH:282

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04333

SEQUENCE DESCRIPTION:

GATCTCTGTG TTTGCAGTCA AAGGGCGGCT CACACATGGT CAAGTATTAT AAATNTCCTG 60  
TGTATCTNAC AATGGAATCT ATTCTACAAT TTAAAGTATA CGCTTCTGT ATATGGCCAT 120  
TAAGTGAAGC TTAATAATCT TGTNTTNTCT GTCCTCATAG ATATTTTAAT CTGTGGCATC 180  
CTCCTGTAAT CTCAGCATTT TGGGAGGCTG AAGATGAGAG GGTGCTTGA GGCCAGGAGT 240  
TCAAGACAAA CCTAGGCAAC ATAGCAACCC TGTCTCTCCA AA 282

SEQ ID NO:3679

SEQUENCE LENGTH:280

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04334

SEQUENCE DESCRIPTION:

GATCTGAGGT GATATGTTCT GAATGTAAGC ACCGTCAACA TCAGACACCT ACTCATGGAC 60  
ATGTGGTTGC CGGATTTTCT TAAGATGTTT CCAGAAATGA CTGATATTTT ATATTATAC 120  
ATTTTAGATG ACAAAGCTTG ATATTTATTG CTGTCGCACA TTTTAAAGTT TTCTTTTTGG 180  
GTTGCTCTGT GNCANGGCGT GGTACATGG TGNTAAATCG GTACCTGATA ATGTACCCAA 240  
ATACTATGGC CAGATAATAA ATTGNGGTGC AAACAACAAA 280

SEQ ID NO:3680

SEQUENCE LENGTH:278

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04335

SEQUENCE DESCRIPTION:

GATCACTGTG CAGTGGGACC ACCCTCACTG GCCTTCTGCA GCAGGGTTCT GGGATGTTTT 60  
CAGTGGTCAA AATACTCTGT TTAGAGCAAG GGCTCAGAAC NCNNAATAC TGTCATGGAG 120  
GTGCTGAACA CAGGGNNGGT CTGGTACATA TTGGAAATTA TGAGCAGAAC AAATACTCAA 180  
CTAAATGCAC AAAGTATAAA GTGTAGCCAT GTCTAGACAC CATGTTGTAT CAGAATAATT 240  
TTTGTGCCAA TAAATGACAT CAGAATTTTA AACATAAA 278

SEQ ID NO:3681

SEQUENCE LENGTH:277

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04336

SEQUENCE DESCRIPTION:

GATCANAGAN TNACAACTGT TCATTATAGT GGTGCCTTAG GCAATCTTN CAAAGTAAAT 60  
TCAGGGCCCC ATTGCTACTT ATGCCATATT TGGACATACT TTTTTTTCT TCAATTTTGT 120  
AAACTTCCTG GAAAGCTGTC TTCCTAAGT ATCCCNAGT CTCTATCTAT GNGGNTAGTA 180  
GTCATGGAAA TAACACATAA AGTACGCCAG NAGTTNGNTG GAACGTGTTA GAAACTGTTT 240  
TGTGCTTTNA TGGATGTCAT ACTTGNCANT ACATGTN 277

SEQ ID NO:3682

SEQUENCE LENGTH:275

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04337

SEQUENCE DESCRIPTION:

GATCTTTCTT TACTTGATGT GTCCTTCNT TCGCAGATTG ATAACAGAGC TGTGCTAGAA 60  
 CTGAATGCAA GCTTTCCTTCAAA ANTNITCATA AAAAAAGCT TTAAGTCACTG ACTTAATATA 120  
 TGTNCTGTAT TAAATTAAT GTGCTTTGTT GGGGTTTAAT TTTGGNATTG GTTTTGGGT 180  
 TTNTTTTGTAG TTGTTTAAAT GGTAAGAATT AAGACATTT NTAGATTTTA AAGAAAAATA 240  
 TGAAATTNTC CATTAAATCA AGTAAAAATG TGAAA 275

SEQ ID NO:3683

SEQUENCE LENGTH:269

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04339

SEQUENCE DESCRIPTION:

GATCTCCGCA GTCTTCAGCG CATTGGCCCG AAGAAGGCC AGCTAATCGT GGGCTGGCGG 60  
 GAGCTCCAGC GCCCCTTCAG CCAGGTGGAG GACCTGGAAC GCGTGGAGGG CATAACGGGN 120  
 ANACAGATGG AGTCCTTCCT GAAGGCAAAC ATCCTGGGTC TCGCCGNCGG CCAGCGCTGT 180  
 GCGCNCCTCT GACCGTCGTC TCCTCACTCC GNCTTTTCAA ATTTTGTAT AACCCCGTGT 240  
 TGTGTAAATA CAGTTTTTGC TCCGGTAAA 269

SEQ ID NO:3684

SEQUENCE LENGTH:266

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04340

SEQUENCE DESCRIPTION:

GATCAGGCCA GTAGTTGTG AATGCAGGCT GGAGCCCCG AATGCCCCAN NCACACTGCA 60  
 GCATTGACCA GACCATCCGA AACCTGCGTC CCTGGTGATG TTCTCAAGCC TCGGAAGTGG 120  
 CAAATGGAAA TAATATGGCC GGTTCGGGT GTAGGAGAGT TGTGACTTAG GCAGGAGTCG 180  
 ACCTCCTCAA GTAATGGAAC GATTTCAAAG GCAGGCTGCC CTGACCAAAA ATATCTGCCA 240  
 TGAATAAAGG TGCTGAAAT CCTAAA 266

SEQ ID NO:3685

SEQUENCE LENGTH:266

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04341

SEQUENCE DESCRIPTION:

GATCTACTTT CAGGATTATT TTTGTNTT GAACGTGACA GTNTGGATGA GGCAAGTNAG 60  
 TTAGATGCT GCGACCCTGC GAGAAGCAAT AGCTAGTGAA CACATTAGCT CCCTACATGG 120

EP 0 679 716 A1

GACGCAGCTC CCTCTGACAT GTGTCTCTGC CCTTAACCAA GACAGAAAGG GGGTAAATGG 180  
 AGGATTGGNT TACTGTCTTT GCTGGTTAGT TTTGTGAAAT TTAAAAATG TTCAACTTTT 240  
 GANTAAACTC CTTAAACTT CTAAAA 266

SEQ ID NO:3686

SEQUENCE LENGTH:270

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04342

SEQUENCE DESCRIPTION:

GATCTCCTTC AGTNGTCTAC CCACTTCCGT CATTGTCCTC CGCTAGAATA ACAGAGTAGT 60  
 TGGTAGTCAT GGCCAGAAGG GGGGTGGGGG CAGTGTGAGG ACTTGGGGTT TCTGTGCTGT 120  
 GTGACACAAG GAGATAAGTG ACAATNTGA AGTCCTAACT TGCCTATTC TAGAAAGTAT 180  
 AGTGGTGATT TTTGTGCAA GATTGAAGT TTAAAAAAG TACCAAGTTC CTGAAATTCA 240  
 ATAAAAATATT TTTATTAATT TTAATGGAAA 270

SEQ ID NO:3687

SEQUENCE LENGTH:264

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04343

SEQUENCE DESCRIPTION:

GATCTCAGCT CACTGCAACC TTCACCTCCC GGGAGCATGC TGCTCTATCT TTTTTTNCAG 60  
 ATGTTTGAGC TATCCAGGT TTTTGGGAT TTCTGTTGNT TTGTTTGTGTT TTTTGCTTTT 120  
 CTACATAATT GTTTGGATAA TCTTGTCACT ATCTACGAAG TGCCTTGATA GTAAATATAT 180  
 NAACCCTGTG TATCAATNTG GGGTAATTNC ACATNTTTTT CTATGTTGAG TTATCAATAA 240  
 ATTGATATTG TATATGNCTC TAAA 264

SEQ ID NO:3688

SEQUENCE LENGTH:262

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04344

SEQUENCE DESCRIPTION:

GATCCTCAGT GCAAAATGTC TTGTGTANTT NTNTGTGAAT CCATGGGTCT GGCTAGAGGG 60  
 CCCAAAGCTT GTAAATATGG GGATAGTCTG GGTGAGACCC ATCTNTCCCT TACCCATCTT 120  
 GCTTCCAAGA CCATTGTAG TGAGCGAGTG GATGCTGTGC TACGTGTGAA ATCTGTCTTT 180  
 GCGGGGCCTG TCTCAGTGAT TCGNTTTTGG TATTNGTTTG TAGCTTTCCT GGAAGTCAAA 240  
 TAAATGTTTC CCCCCTCCA AA 262

SEQ ID NO:3689

SEQUENCE LENGTH:256

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04345



## SEQUENCE DESCRIPTION:

GATCTCAAAAT GTGAACAGTT TACTAATGCA CTAAGTGAAGT TTAAATCTGT GGCACAATCA 60  
 ATGTAAGCAT GGGGTTTGTT TCTGTAAATT GATTTCTAAT NTGAAATTAC TGAACAACTC 120  
 CTATTCCCAT TTNGCTAAN CTCAATTTCT GGTTTTGGTA TATATCCATT CCAGCTTAAT 180  
 GCCTCTAATT TTAATGCCAA CAAAATTGGT TGTAATCANA TTTTAAATA ATAATAATTN 240  
 GGCCCCCCT TTAA 256

SEQ ID NO:3690

SEQUENCE LENGTH:251

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04346

## SEQUENCE DESCRIPTION:

GATCTAAAAA GCTGAATAGC ATGTNAGTTA CTTGGTTTCA ACTTGAGTTT NCTTTTAATG 60  
 TTAATAAGAT TGAACCTTTA GTATTTAGTG GGAATGGAA AGAGTTGCC TTGTTGCAAG 120  
 TAATGAAGCC TGATTGATT ATGAAGCTGC TTAATCACTC TTCATGTGTT CAGAATTACT 180  
 GTTTTNTTG TTTGTTTNC CTTTNGTCA CTGTGGTACA TTAATAATT NGGAAGATG 240  
 CTTTACCTAA A 251

SEQ ID NO:3691

SEQUENCE LENGTH:250

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04347

## SEQUENCE DESCRIPTION:

GATCCCAGAC CTGTNGTCTC TCCCACCCC TCCCCAAAGC CACTGGAAGG AGCACATACT 60  
 ACCTAGAAGT AAGANGNNGA GCCTCAGAAG AAAACAAAGT TCTATTTTAT TAATTCCTA 120  
 TGTGTTGTGT TTGTAGTCTT GTCTTAGCTC TGGACGTGAA ATACTTCGAT GATGATGATG 180  
 ATGATGATGA TGATAATAAT AATAATAATA ACAACAACA CAACAATAAT AAAGATGTGA 240  
 AAACCGAAA 250

SEQ ID NO:3692

SEQUENCE LENGTH:248

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04348

## SEQUENCE DESCRIPTION:

GATCTCAGAT AACTCAGTAC AGATAGCAAT TAGTCAGCTG ATTTGATTAC AATGGAGTAA 60  
 CCGACAATAT ATTTATTTAT AAAGCACATA TTCATAATAA CGAGAAGAAT TCAGAAAACC 120  
 ACTTAAGCAA GACCCCTCTG AAATAAANN TGNGCTTTT TAAATAGTTT GTCCTAAGGT 180  
 GTTTAAANCA TGTCAACCTT ATGTAAGGNN AANTTCCTG GTCCAANTAA NGTTGANGTT 240  
 TAAGGAAA 248

SEQ ID NO:3693

SEQUENCE LENGTH:248

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04349

5 SEQUENCE DESCRIPTION:

GATCCTGGTT GGAAGGATGG GGACTCTCTC AAGGGGCTTT GGAAGAGCTC TTCTAGCCCT 60  
 TTATAAAAGG AGGGCAGCAG CTGAGACTGA TGAGAGGAGG GCAGCCTGCT CTGTTCTTTC 120  
 AGGGCCCCC ACCCCATCT CCCCTACCCT AGCCCACCCT AGGGCCTCTA CCCAGCGGGA 180  
 10 GGGGTTGAAG ACCAGGCCTG GTTTTATTAG AATTCATTTT GTAATAAAAG CCTTTTTTAG 240  
 TGGTGAAA 248

SEQ ID NO:3694

SEQUENCE LENGTH:248

15 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04351

SEQUENCE DESCRIPTION:

20 GATCCTATTT TNATGAAATG TCCAGAACAG GCAAATCCAC AGAGACAGAA ACTAGACGAA 60  
 TGGTTGCCTG AGGGTGAGGG GAAACAGGGA GTGACTGATG ATGGGTTTTG TGTGGGGGCA 120  
 ATAGAATGTN CTAATAATTG ATAGTAATGG TTATACAAC CTGAATATAC TAAAAGCCAT 180  
 TGTACACAG TTAATAAGGG TGGATTGTAT GTGAATTCTA TCTCAATAAA GCTGTTCAAA 240  
 25 AATTCAAA 248

SEQ ID NO:3695

SEQUENCE LENGTH:245

30 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04352

SEQUENCE DESCRIPTION:

35 GATCCACTCC GCCATCGATG CATCCCAGAC CCCCAGATGTC GTGTTGCGAA GCATCCTAGC 60  
 AGCCTTCTCC AAAGCCACAT GTAAAGACTT GGTATGTTT ATCTAATGTT GGGTCCAAGA 120  
 AGGAATTTCT TTCCATCCCT GTNAGGCAAT GGGTGGGAAT NATAGGACAG GCAAAGAGAA 180  
 GCTTCCTCAG GCTAGCAAAA ATATCATTTN ATGTATTGAT TAAAAAAGCA CTTGCTTGAT 240  
 GTAAA 245

40 SEQ ID NO:3696

SEQUENCE LENGTH:243

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

45 CLONE:HUMGS04353

SEQUENCE DESCRIPTION:

50 GATCTCAAAA CCACTATTTT TATTATTCA TTATTTTCA GAGGCCTTAA AATTCTGGAT 60  
 AAGAGAATGG AGGAAAATAC TCANCGGTAC TTCATTATTT NATTTCTTTT TATTAAAAAA 120  
 TTACTTCTAT GTTTNATTG TCTCTTGAGC CTTAGTTAAG AGTAGTGTAG AAATGCATGA 180  
 NCTTCATCCT AATAAGGATA AANCTTAAGG AAAACCACAA TAAACCATGA AGGTGTACAC 240  
 AAA 243

55

SEQ ID NO:3697

SEQUENCE LENGTH:241

SEQUENCE TYPE:nucleic acid

5 TOPOLOGY:linear

CLONE:HUMGS04354

SEQUENCE DESCRIPTION:

10 GATCTNTCCA CGGTAGCACT TGNCCTTTTC GACGCTTAAC CTTTCCGCTG TCGCCCCAGG 60  
 CCCTCCCTGA CTCCTGTGG GGGTGGCCAT CCCTGGGCCC CTCCACGCCT CCTGGCCAGA 120  
 CGCTGCCGCT GCCGNTGCAC CACGGCGTTT TTTACAACA TTCAACTTTA GTATTTTAC 180  
 TATTATAATA TAATATGGAA CCTTCCCTCC AAATTNTTCA NGTAAAAGGT GGCTTTTCAA 240  
 A 241

15 SEQ ID NO:3698

SEQUENCE LENGTH:239

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

20 CLONE:HUMGS04355

SEQUENCE DESCRIPTION:

GATCAGCACT GCACTNTTAG CTGAGAGTGC GGGCAAGACA TAAACTGTCC AGAGTTTNA 60  
 GNTTCTNGGA AAGACCGGAG GGCTTCTCCC CACAGAAGGC GGAGAGAGCT GGGNCTCAGA 120  
 CATGGNTGTG CACCTTAATA AACCTGTG TCTGCCTCCC TGA CTCTGCT TCTNNGGAGC 180  
 25 ATGGTGAGCA GCCCTNGTGC TCANCAGCCA TACCTATGGG ACACACACTA CGNAAAGGN 239

SEQ ID NO:3699

SEQUENCE LENGTH:236

30 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04356

SEQUENCE DESCRIPTION:

35 GATCACAGGT GATTCACACG TACACACATA AACACACCCA CCAGTGCAGC CTGAAGTAAC 60  
 TCCACAGAA ACCATCATCG TCTTTGTACA TCGTATGTAC AATGCAATCA TTTCACTATT 120  
 TAAACTGGTC AAAAACTAA TTGTGATTTC TAGTCTTGCA AAGCTGTATG TAGTTAGATG 180  
 ATGTGACAAC CNCTAATATT TATCTAATAA ATATGTATTG AGATGAAACC TGTA 236

40 SEQ ID NO:3700

SEQUENCE LENGTH:235

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

45 CLONE:HUMGS04357

SEQUENCE DESCRIPTION:

GATCCATCCT TTATCAGGAA GTCTGAAGCG ACTATAAAGG TTTTNTANTT CAGATTTAAA 60  
 AACCAACTTA TAAAGCATTG CAACAAGGTT ACCTCTATTT TCCACAAGC GTCTCGGGAT 120  
 TGTNTTTGAC TTGTGTCTGT CCAAGANCTT TTCCCCCAA GATGTGTATA GTTATTGGTT 180  
 50 AAAATGACTG TTTTCTCTCT CTATGGAAAT AAAAAGGAAG AAAAAAAGG GNAAA 235

55

SEQ ID NO:3701

SEQUENCE LENGTH:232

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04358

SEQUENCE DESCRIPTION:

GATCCGTGTT CTCCATTAT TAATGCATTG TAGACCAATT TAACTGCTGT GTTTCAGGAA 60  
AATTCTTCCT AGTTTAATAA GCAAGCTAAA AGTTTATT TTTATATTTA GTGCTTAATC 120  
TTTGCTCAT GTTATGTAAA ATTAGCCTGC AGATATTTTC TCTCAATTCT GTAGACTCTC 180  
GCAAGATAAA CATTCAAACA GTGAAACAAA CANTAAAATA AATAAACCTA AA 232

SEQ ID NO:3702

SEQUENCE LENGTH:231

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04359

SEQUENCE DESCRIPTION:

GATCCATCTG AACTATGAAG TGAGTACCTG GAGGAACTCC TACATTTAAG GCTTTCAAAG 60  
GTTACAGGCT TTTCTGTGT GTGTGTGTGT GTGTGTGTGT GTGCGTTTGT AGAAAAATGG 120  
AATTCAAACA CTGTNNTTAG AATGTATGTT TACTTATATA GAATTAATGA ATNTATATAA 180  
TAATAATNAC TGTATATAAT TNTAAAATAT AATAAAGTCT CTTTATCCAA A 231

SEQ ID NO:3703

SEQUENCE LENGTH:237

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04360

SEQUENCE DESCRIPTION:

GATCTGGAGT TGAGAGCCAT GGGTTTGGAC ATGACTGGCA CAAACAGCTG TCATATGTTC 60  
ATGGTCAGAT GTCATACATT CTCAGCTGTC TTGTTCCACC AGTATTTACC AGGAAAACAA 120  
AGAATGTGTT AAGGGATGCT CCCCCACCCC ACATCTTAAG TCAGTGTGCC AAGTACTGAG 180  
ATGATTTTAG GGACATTTTA TTTTAAATTA AATTIACAAT CTAATGGTAA ATTGAAA 237

SEQ ID NO:3704

SEQUENCE LENGTH:231

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04361

SEQUENCE DESCRIPTION:

GATCATCAAC AAGATTTTCCT TGTGCAAAAT ATTTGACTAT NCTGTATCTT TNATCCTTGA 60  
CTAAATTCGT GATTTTAAAG CAGCATCTTC TGGTTTAAAC TTGTTTGCTG TGAACAATTG 120  
TCGAAAAGAG TCTTCCAATT AATGCNNNTT TTATATCTAG GCTACCTGTT GGTTAGATTG 180  
AAGGCCCCGA GCTGTTACCA TTCACAATAA AAGCTTAAAC ACATTGTCAA A 231

SEQ ID NO:3705

SEQUENCE LENGTH:229

SEQUENCE TYPE:nucleic acid

5 TOPOLOGY:linear

CLONE:HUMGS04362

SEQUENCE DESCRIPTION:

10 GATCAAAATT GAACCATTTG ACAGTTTGGN TTCTGTTTGC TTCAAAATAT GTAGAATTGT 60  
GGTTGATGAT TAATTTGCGA GACTAACTTT GAGAGTGTA CANTTTTGAN GAAAACATTG 120  
AATGTTTTGC AAATGAAGGG GCTTCACGGA ATGTTACANT GNTACTAATA TAATTGGGCT 180  
TTNNTNATGC AAATNGTTAA CACCAGCTAT TAAATATAT TTNGTAAA 229

SEQ ID NO:3706

15 SEQUENCE LENGTH:228

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04363

20 SEQUENCE DESCRIPTION:

GATCGCTACC CACCTTCCTT CCATGGTTCC CACCCTCCAC GTTATTTTCC CTTTCTGCAG 60  
CGGTTGCACT ACAGGTAGCT ACTGTGTATT ATGGACAAAT GAGAAATGAA TTCTTTTCT 120  
GGCTGTCCAT CTATTTTATT TCAAATAAGG AAAAGTGTAT TTGGATTTTG TGAAATACA 180  
TCTAGTGATG NCATTTTTTC AATGTTTTNA AAAACCGTGT ACAGTAAA 228

SEQ ID NO:3707

SEQUENCE LENGTH:228

SEQUENCE TYPE:nucleic acid

30 TOPOLOGY:linear

CLONE:HUMGS04364

SEQUENCE DESCRIPTION:

35 GATCCTCATC CAATTGGTGT TTTTCAGAAG TNTTCCAATA TTATGAATTC TGTGTTGTGG 60  
AGAAAAGCAA CCATGCATT ACTGTGCAAT GCCTTCTTGT ATATGTAATT CAATACTTTT 120  
ACTTTTAATA TCCTCACCTT ATCTAATCTT TGATTTTGT CATGTAATTT ATTGCTTCAT 180  
TAAGGTTACT TTTTGTATA CAAAATAAAA GCTGATATCC AAGGCAAA 228

SEQ ID NO:3708

40 SEQUENCE LENGTH:226

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04365

45 SEQUENCE DESCRIPTION:

GATCTATGAA AATNTGTTTT GACCAAACCT AGTATTAGGC AGGTACACAG ATAAGATTTT 60  
CCATTCTNAA CATTCTCACT GTAATGCACG ACATTTGANG CACCTGNATG TGCTATCAAT 120  
CAGGTGGGAA ATTTAGCATT ATATATTGGA AGCATTGAGA AACATTGGTC TNTCATTCT 180  
ATTTNNTTTT NCCCCTCCTN TCCTCCTCCT GCCCCACANT ATATNN 226

SEQ ID NO:3709

55

SEQUENCE LENGTH:224

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

5 CLONE:HUMGS04366

SEQUENCE DESCRIPTION:

10 GATCCTGAGA GCTTTGAGAG GGTGTTGCCA GTTTTAAGCT GAGATGGCCC ATTTGGAGCC 60  
 TTACAGAACT AGACCAGAAG ACATTTGTGG ATAAATCTGA ACTCACTTCC TGTGTGTAAC 120  
 TTCTAACTTC ACTGGTTCCT CCCATCTGAA TTGGCCACAT GCTTGCTGAA GAGACTTGTT 180  
 TTCTTCTTCT AAGACAGTGG TTTTGTTTT TGGGTTTTT TAAA 224

SEQ ID NO:3710

SEQUENCE LENGTH:223

15 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04368

SEQUENCE DESCRIPTION:

20 GATCTGGGCA GAATCCGCCA AGCGGCTGGG CCCAGGCTGT GGCATGATGN ACGGAGNAAN 60  
 GAAGCACCTG GACTTCTAGG GATTCTCCT TAGTCGCTGC ATGCAGAATT CTATGACACT 120  
 CTAATNATGA TTGCTAATAG CTTATGTAAA TATTTNNNTT AACAATTTGG NCCTNCACTC 180  
 CTTNAAAAAC ACAAGGATTA TAAAATGGGT GCCNGCATT NTN 223

25 SEQ ID NO:3711

SEQUENCE LENGTH:221

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

30 CLONE:HUMGS04369

SEQUENCE DESCRIPTION:

35 GATCGTATTC NTNATAAACT ATTACCAGTA CAGTAGCTAG TAGATATNNT GTGACTGCCT 60  
 CATTGTTTAT CTGCTGCTT TGGTCCCTAT GGCTCTAGTA TGAACATTCT CGTGTCTTCT 120  
 GTGGAAATGA TTTCTGTGTT ATAGTTNCAN CTTNGGTAGA GGTGGGGATG ATTGTATTTT 180  
 GTTTTAGTTG ACATCATTCT CAACTNTTAG AAATACTGTT N 221

SEQ ID NO:3712

SEQUENCE LENGTH:219

40 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04370

SEQUENCE DESCRIPTION:

45 GATCAGTTTG CGAGTTTGA TGAGNTTGT AAGGTTTNTN TTTTACAAAC TATGAATCAG 60  
 CAAATNTTTA AGATTGTACC ACATAGCAAA CACACAGCTG TTGAAAAATA ATGTATATAA 120  
 AATGCATATA ATAAATATTA AATNGTGTAC CTGTATGTTA CTGTTGGCTA CATCATTTTG 180  
 TGTTGAATAA TAAAGTGCAA TACNNNCCTT CTCCATAAA 219

50 SEQ ID NO:3713

SEQUENCE LENGTH:214

55

# EP 0 679 716 A1

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04371

5 SEQUENCE DESCRIPTION:

GATCATTCTG TATATACATA TTTTAAATTA TGCAAGCAAA CTAGGAGGAG AATGTNCAAT 60  
TTTAAGGGAT ACCTAATTTT CNTTCGGTTA GGGGATATTT TCCANCCTCT TGCTTTATAC 120  
TCTGATATGG GGTGTNTTTA TGANCTTTTT AATGTTATTT ANTCATGCAG ATTTCCAATC 180  
10 ANTGTATTGC NCATTCCTG AAAAAANGGG NAAN 214

SEQ ID NO:3714

SEQUENCE LENGTH:215

15 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04372

SEQUENCE DESCRIPTION:

GATCCAAAAN ATAAACTTG AAGCTATTCT GGAACATAACA TGGAAAAATG AAATGGCTAT 60  
20 TGTTTAAAAA AATGATAGAA ATACATTGTT GATGGGATAT GAGTTAAGTT TATTTTCTAC 120  
AAACCTGTAA TTGATGACGG CATGGATAAT ATCTTCATGT TTCTGACNAG TAATCTGTAT 180  
GTGGGGGGAG GGGATAATAA ATATTTCTAA CCAA 215

SEQ ID NO:3715

25 SEQUENCE LENGTH:335

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04373

30 SEQUENCE DESCRIPTION:

GATCAAAAGT GAACACCCTG GCCTATCCAT TGGGGATACT GCAAAGAAAT TGGGTGAAAT 60  
GTGGTCTGAG CAGTCAGCCA AAGATAAACA ACCATATGAA CAGAAAGCAG CTAAGCTAAA 120  
GGAGAAATAT GAAAAGGATA TTGCTGCATA TCGTGCCAAG GGCAAAANTG AAGCAGGAAA 180  
35 GAAGGGCCCT GGCAGGCCAA CAGGCTCAAN GNAGAAGNAC GANCCAGNNG ATGAGGAGGA 240  
GGAGGAGGAA GANGNAGATG AAGATGAGGA GGAAGAGGNT GAAGATGAAG AATAATTGGC 300  
TATCCTTTAA ATGATGCGTG TGAATGTGT GTACN 335

SEQ ID NO:3716

40 SEQUENCE LENGTH:211

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04374

45 SEQUENCE DESCRIPTION:

GATCAAATGT GCTGCAGCTT TTGCAGAAAA CAACTCAGAA ACACAAAACC CCCCACAGC 60  
TCAATTATTA TTTTTCAT GTTTCTCTAC AAGAGCCAAG TAGCACCATG TACAGAAGAC 120  
GCCTTTTTTT TTGGAATATT GAAATCGTTC TGCATGTAAA ATATGGGATA ATGACCTGTT 180  
50 TATATAAAA TTCTGATTAA ATTATCTGAA A 211

SEQ ID NO:3717

55

SEQUENCE LENGTH:390

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04375

SEQUENCE DESCRIPTION:

GATCAAGAAT TCTACCATCC CTTGGGTCTT TGTGTATAAA CAATGTAAA TACCAGGTAG 60  
 ACTCAGTCTT TAAGATATTA GACAGTTTTT TTAGTCCATG GGNTNNNNAA TATAAACATT 120  
 AACTTTCCTA TAAGANTATT TTGGCTTTGT AATCTATAGC CTCAAATTGG TATTTATTAT 180  
 GGNTTCACTA GACAAACAGC TGTTCCTTA TTGTNTTTN NCTTTAGTGT TTCTGATTG 240  
 CTATCAGTAG CTGTTTTTAA AGCCGNCCAA GGNAATANT TATTTGCAGT TTTTGAAGT 300  
 CACTTTTGA GCCCTCATNC AAGCTCTCAT TGTGGNTGGG GAGGGATACC NTTTTGGTT 360  
 GTTAAAAGGC CTATNATTGG TTAAGGGCN 390

SEQ ID NO:3718

SEQUENCE LENGTH:235

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04377

SEQUENCE DESCRIPTION:

GATCTTAGAG CTGAGGAATT GGCTCCCAA TCCGAACAGG TGTTATAATC CTTTCTNAAT 60  
 AGGTGTGCT GTGGACCCAA TGTNAGGGCT GTNCTGGTGT AAATGGTGAC ATATTGAGCT 120  
 GGGGGGATGC TTTGGGGTG GGGGACTGG TTCCATTCCA TCAAAGGCC CTCTGAGAG 180  
 TCTATCCNGG GNCCATTGG TTNAATTAA CAGGCCAGNA AAGANGGTTG NTNNN 235

SEQ ID NO:3719

SEQUENCE LENGTH:209

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04378

SEQUENCE DESCRIPTION:

GATCTCCTGA GCTCAGGCAA TCCGCCACC TCGGCCTGTC AAAGTGCTAN GATTACAGGT 60  
 GTGAGCCACC ATGGGTGGCA TCTTAAATAT AGATTTATAA GGCCCNNTG TTATATATT 120  
 NNAAAATTC AAATTTAAAC TANATCCCA AATGTCCNT TTATTAATGA AGTATTTGT 180  
 CANATGGATG TTTAAAGCT GTGTATGTN 209

SEQ ID NO:3720

SEQUENCE LENGTH:209

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04379

SEQUENCE DESCRIPTION:

GATCTAGGAT TACTCTGGAC CTCATTCCGG TGTTATGAGT ATCCCACGAA GGCCAGACGC 60  
 TGATTTNATT TNCTCATTT CACAGATTGA CAAGGATAAG TCAGNNGTT GTAAACTCTA 120  
 GGTAGCAGAT GAGAAATAAT TCACTTAATA TCAGAAATAT TTNCCAAACA CTTTCCTNA 180  
 TTTTCCTTC TGANTAAATA GANANCCNN 209



EP 0 679 716 A1

SEQ ID NO:3721

SEQUENCE LENGTH:208

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04380

SEQUENCE DESCRIPTION:

GATCCAAGGA ACGTTTGGGG TTTCCTAGGT GGGCCACATC CAATCAGTGG AAGGTCTTAA 60  
GAGCAAAANC TGAGGTTCTT CAGAGAAGAA GGAAATGTTT TAAGACTTCA GCATCAATTC 120  
CTGCCTGAGT TTCTAGCCTG CTGGCCTGCT CTACAAATTT CAAGCTTGCT AGCCCTCACA 180  
NTCACATGAA TAAATTCCTT AAAATAAA 208

SEQ ID NO:3722

SEQUENCE LENGTH:208

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04381

SEQUENCE DESCRIPTION:

GATCCTTTCC CCATGGACAG TGACAGAGCA ACTGGGCCGC AATGGCATAG GCAGAAGAAA 60  
ATNTAATCAC TCTGGGGGTG ANTGGTGGTT AAAACGACTC ATGTAATTAT TTGGATTGTA 120  
ATTCNTTAC ACATATTINT TTGCTTAACC CAGCATGTNA GATATATNAT NTAATCTAAT 180  
AAAAGATACA AACTTATGGG CACACAAA 208

SEQ ID NO:3723

SEQUENCE LENGTH:207

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04382

SEQUENCE DESCRIPTION:

GATCACCTG GAGCTGTGGC TTCCCCGAGC AGCTGAGAGT GAAAGGAGGC AGTTCCTTTA 60  
CTGTGAGCTC TCACGGCAGG GTGCTCAGC CCCACACAGG GGCTGCCTTC ACTCGGCTTC 120  
AGCAGCNGTT GACTTTTAAA TCATAAAAAG CCGCTCTATA TACAGTTTAC TCTGTTGCTA 180  
GAAGGCAGTG GAACATAGGT ATTTAAA 207

SEQ ID NO:3724

SEQUENCE LENGTH:207

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04383

SEQUENCE DESCRIPTION:

GATCCACGTA CAGTTTGGAT TTTCCTTCTA GCCTTCATGT GTGGCCCAAG CATCTATTTT 60  
AGACTGTGAT GGTGTCATT GTTCTCTGAG GTTCTGTCTT CCCTTCGTGT TTCTATGAGC 120  
TTTAATTTGT ATGGTTCTTG TTCTGTAAAT GCCACTAGGG ACTATGTATT CCTGATTCCA 180  
CCATGACAGC TACAGTAAAA CAGTAAA 207

SEQ ID NO:3725

SEQUENCE LENGTH:204

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04384

SEQUENCE DESCRIPTION:

GATCAAGCAG GCACCTCAAG CCTCAATAGG ACCAAGGTGC TGGGGTGTTC CCCTCCCAAC 60  
 CTAGTGTTCA AGCATGGCTT CCTGGCGGCC AGGNCTTGCC TCCNTGGACT ANCTGGGGGG 120  
 TTCCGGGTCT CAAGAAGACA AGGGTGCTGG NCCTCCCTAA GCCAAGGAGA GGANTAAAGA 180  
 CAAAAAGCTN AAAAAAAG GAAA 204

SEQ ID NO:3726

SEQUENCE LENGTH:202

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04385

SEQUENCE DESCRIPTION:

GATCTCGAAC TGTACCAAAA TACATGGAGA CTAACAAACA GAACCACATG GAACTTTCAA 60  
 ACTGAAAAAA AAATTGTCA CAAAACTTT GTTGTCATAG TTAAGTTGAT TGTAGATGGT 120  
 AATTGAATAT ACTCCTTTGA AAATATTTCA TCAAGTATGT TTCCTGCTCA TTGTGATACA 180  
 TTAAAAAAA ANTATGGGCA AA 202

SEQ ID NO:3727

SEQUENCE LENGTH:219

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04386

SEQUENCE DESCRIPTION:

GATCCAGAAG GCTTACGAGT ATTTTATTAT CTTGTCCAGG ACCTGAAGTG TTTGGTCTTC 60  
 AGTCTTATTG GATTACACTT CAAGATTAAA CCAATCTAGA CTGAATATTG GTGTGGACAT 120  
 GGGGGGTGGG TGGGAGTAGA AAATTTTGTG TATATCAGGG CAGTATTTT TTATGAACTA 180  
 TAAATGATTG TCTTTAATAA ATATGTGATA AAATCCAAA 219

SEQ ID NO:3728

SEQUENCE LENGTH:200

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04387

SEQUENCE DESCRIPTION:

GATCATATTT AGAGGATATA ACAATTAGAA ATCTAGAAAA TAATTATCAC TTTNATAAAA 60  
 TTTNAGTCA ACTGTACAAA TAATTACATA AAACATCAAT TAATNATGCT TAAAAATCAC 120  
 TAATNTTCAT AATATATAAT CACTATTTGT AATCAAAAGT TTAATTTTAT NTNAAAAAAT 180  
 AAAAAATGCT TACTTGAAAA 200

SEQ ID NO:3729

EP 0 679 716 A1

SEQUENCE LENGTH:198

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04388

SEQUENCE DESCRIPTION:

GATCAGCCGA ACTCTAGGGA CTTGGTGTG CTTGGAAGGC ATCCATACCT GCATTTTGCA 60  
TTCTTCGTAT GTAATCATAT TGCCAAAGAC AACTATTTT ATCATTATT GTAAATAACA 120  
CTTTTCCCA GACCTACCAT AAAGTTTCTG TGATGTATTG TCTCCAGTT GCAATAAAAA 180  
TTACTGAGTT GCATCAAA 198

SEQ ID NO:3730

SEQUENCE LENGTH:197

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04389

SEQUENCE DESCRIPTION:

GATCTAAGAT TAATCCTCA ACTGTTTGC ACTCAACAAA GACATACCTC TGAGTTGGCA 60  
ACCAGCAGGG TGGATAACGG GCCAGTGGTG ATAAATCAA AGAATAGGTA ATGAAACAAT 120  
CATCCAGTTA ACAATCAGCA AGGTTCTTCA GAGCCTAATT AATGTTAAT TCTAAATAAA 180  
TTGCAACAAT TAAGAAA 197

SEQ ID NO:3731

SEQUENCE LENGTH:197

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04390

SEQUENCE DESCRIPTION:

GATCCAAAAG TTAAATTAG TGCATACATC ATGTCATTC ACCTCCTGTT CCTAGGAACT 60  
CTCCATTCCC AAGCATTGCC AGTGTTCCTC AGATAATCTT AGCTGTTGTC TTGTGCTGTG 120  
GAAATGGAAG AAACCATCTT CACAGACTGT AGGAGAATTC AACATATAAT TTCTTAATAA 180  
ATACTGTTTC TTTTAAA 197

SEQ ID NO:3732

SEQUENCE LENGTH:195

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04391

SEQUENCE DESCRIPTION:

GATCTAAGGG AGTCCACTAT CTGTGCAATT GTATTTGGNT TTTTTTGCA CTGTTTCAAT 60  
GCTGGTAATT GAAACCATT TAATATATTT GGTGTATTC ACTTTATATG TCCTTCCAAA 120  
AATNTTGTG TGTACAAACC ATGNNNNNGA ATGTTGGCTT CCAAGTTTTT AAATAAGAAA 180  
CTTTTTGTAT TTTAAA 195

SEQ ID NO:3733

SEQUENCE LENGTH:195

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04392

SEQUENCE DESCRIPTION:

GATCCACGGA GCAGAGGTCA TCTGTCCCA GCTTGGCCCA CTGAGGCCAG CATGGNTGGG 60  
 CCCAGGATGC TTGTCTCTCA GCTCCCATCC TGTGTACTTC CACATTGGTT TAACCAGAGG 120  
 AAAACCGAAA TCTACAATTG TNATAAACAC ATTTAAATGT GCGTAGAATC AGCCATACAA 180  
 ATTGTGAAAC ATAAA 195

SEQ ID NO:3734

SEQUENCE LENGTH:195

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04393

SEQUENCE DESCRIPTION:

GATCAACTCC CCCAAGGCC GAAAGGTGCT GCATACCACG TACCANAGCC AGGAGCGTGG 60  
 CACACACAGC CTGGACATCA AGTGGTGAAG TNAGGCCAGG GNCTTCCAGC TGCTCTTGGG 120  
 GCCAGAGCCA AGAGCCTCTN AGTAGAGGGA GGGGCTGCCC TGAGTGGAGT ATTAAAGACA 180  
 CTTAAGAAAA CCAAA 195

SEQ ID NO:3735

SEQUENCE LENGTH:193

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04394

SEQUENCE DESCRIPTION:

GATCCTGTGC CCTAGGAGCA CCTAGGAAGA CTTGCTCCAT CTCCGCCCGC ATATCTGGGG 60  
 CACCAAGAGA GACAGAGTCG TGAGCCAGGC TCGCCTCATT CCTCGTCTTG GGAGAACCGG 120  
 ACCAACTTCC CAAAAGGCC TTGCCGTGCA GAATTGGCCT GGTTTAATAA AGAACAGACC 180  
 TGNCCCAAGN AAA 193

SEQ ID NO:3736

SEQUENCE LENGTH:190

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04395

SEQUENCE DESCRIPTION:

GATCTGGCCC TCCCCAGAAC AATCTGGATT TCACGGAGAC AGCAACCAGA AGTTAAACCA 60  
 TGTGACTAAA AATGCATCTG GCTACTTTT CATGTATGTA TGAGACAGAA ACTAATCCTT 120  
 ACTATCCTAT TAGGATACCA CTTTTCATTG CAAAGTTTGT GTCAATAAAG TCATTAATTT 180  
 TAAACATAAA 190

SEQ ID NO:3737

SEQUENCE LENGTH:190

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04396

SEQUENCE DESCRIPTION:

5 GATCATAAGT AGTGGAGGAT TTAAAACCAG GCTGGCTGGC TCTTAAGGCC TATGCTCTTA 60  
ATTNACCATG TNGAATTAAT TTACCATATT GAATTACACT TATGTNCACC AAGTNAGGCA 120  
TTTNGGCAGC CATTGTTTAC GTTTTANTTT TGGAATAATT TAGAAAAGTT ACCAGAGTAA 180  
TATGAAAGCN 190

10

SEQ ID NO:3738

SEQUENCE LENGTH:187

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

15

CLONE:HUMGS04397

SEQUENCE DESCRIPTION:

GATCCTCCGC ATCCCGTGCG AGGAAGAAGA TGTGGAGATG AGTGAGGACG CCTACACGGT 60  
GCTGACCCGC ATCGGGCTGG AGACGTCAC TCGCTACGCA NNNNNGCTCA TCACAGCTGC 120  
20 CAGCTTGGTG TGCCGGAAC GCAAGGGTAC AGAAGTGCAG GTGGATGACA TCAAGCGGGT 180  
CTNNNNN 187

SEQ ID NO:3739

SEQUENCE LENGTH:187

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

25

CLONE:HUMGS04398

SEQUENCE DESCRIPTION:

30 GATCTGGCCC TAAACTTGAA ATACCTCCTG CTCCTTTGGG GACTGGNCTT TGCNAAGAGC 60  
ACCTGGGGAG GAGACTGGTG CTAATAAGC CAGTAAGTAA GTCCACTCTT TGGNTGCAGC 120  
TGGTGCAAGG TCTACCCATA CCTTTTATT TNCAGTGTTT AATAAAANTC CAGTGNGCAA 180  
AGACAAA 187

35

SEQ ID NO:3740

SEQUENCE LENGTH:186

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

40

CLONE:HUMGS04399

SEQUENCE DESCRIPTION:

GATCAAGTTC TGCNCTGAN GAGGCTGCCA AAAGTCAAAA GNGGGGCCTG GGAAGGCAAG 60  
CTCATTCTC ACAACGGCCT TTCCAGGCCC NGTTTTCCC TTCCGGCAGC CTCTTGGCCT 120  
45 CTAATTTGTT TATCTNTNGT GTATAATCC CAAAATATGG AATTTTGGAA TATTTCCACC 180  
ATTAAA 186

SEQ ID NO:3741

SEQUENCE LENGTH:185

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

50

55

CLONE:HUMGS04400

SEQUENCE DESCRIPTION:

5 GATCTGCCTT CTTGCTGAAA CTTGTTCCAC CTCAGTCCCC TCATCTGTCA CACGCATGTG 60  
 GGGTGGAGTA GGGAGATGCG GGGAGCAGGG TGGGCAGGAA TACTGTTATC TATGTNACGG 120  
 GGCAGTCGTG AGGCTGAGAT GAGAATGCCG ATTAATAATGC CTGGCGTGCT CACCGTAACA 180  
 CCAAA 185

SEQ ID NO:3742

SEQUENCE LENGTH:182

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04401

SEQUENCE DESCRIPTION:

15 GATCCCATCT NTACAANAAA CTTAAAAATT AGCCAGGCAT GATGGCACAT TCCTGTAGTC 60  
 CTAGTACTC AGGAGGCTAA GGTAGGAGGA TTGCCTGAGC CCAGGAGTTC AAGGCTGCAG 120  
 TGAGCTAAGA ACGTGCCAGT ACACTCCANC NNGAGCCACA AAGTGAGACC CTGTCTCGCA 180  
 20 AA 182

SEQ ID NO:3743

SEQUENCE LENGTH:180

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04402

SEQUENCE DESCRIPTION:

30 GATCAAAGTG GTAAAGACAA TGTAATAATT AACATTTTAA TACTGATGTT GTACACTGTT 60  
 TNTACTTAAC ATTTTGGGAA GTAAGTGCCT CTGACTTCAA CTCAAGANAA CACTTTTTTG 120  
 TTGCTAATGT AATCGGTTTT NGTAATGGCG TCAGAAATAA AAGGATGCTT ATNATTCAA 180

SEQ ID NO:3744

SEQUENCE LENGTH:179

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04403

SEQUENCE DESCRIPTION:

40 GATCTNCGGA ATGATGAGCA CACAAGGCGG GAGCTAGCCA AGATGAAGCA GGNGCCGGTG 60  
 AACCTGAAGA AGGCAGAGAT ATGGCAAACA GGATTNGCGC TTTTGNNAC ATGGAGTGTT 120  
 CAGCAAAGAC CAAAGATGGA GTGAGAGAGG TTTTNAAT GGCTACNGA NCTGCTCTN 179

SEQ ID NO:3745

SEQUENCE LENGTH:178

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04404

SEQUENCE DESCRIPTION:

50 GATCTGAGTG CCTCAAGATG GTTTCAAAA AAATTTTTT AAAGAAAATA ATTGTATACG 60

55

EP 0 679 716 A1

TGTCAACACA GCTGGCTGGA TGATTGGGAC TTAAAAACGA CCCTCTTTCA GGTGGATTCA 120  
GAGACCTGTC CTGTATATAA CAGCACTGTA GCAATAAACG TGACATTTTA TAACGAAA 178

5 SEQ ID NO:3746  
SEQUENCE LENGTH:332  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
10 CLONE:HUMGS04405

SEQUENCE DESCRIPTION:  
GATCCGAGTT CCTCACC GCG GCGCGGGATG TGACCACCCT NTTCAGAGGT TGGACCCAG 60  
GCTTCAAGCA CCGAGTGAGG GGTCTGTTGG GCCCCCTGGG AGAGTCTCTG GTGTGAAGTG 120  
GCTTAGGTCT GGACTGGTCA GCTGTGGCAC CAGCCGGTCC TGCCACGCT TCAGGATGGC 180  
15 CGGGGGCTGC CCCTGTGGGA GAGTTGCCAA GACTCGGCCA TACCAAGGAT GGAAGCCAGA 240  
GGCTGTGGCG AGGGAGAGCC AAGCATATTC CCAGCACCAG GGCCACTGCT GGCACGTCGT 300  
AGACATCCA TAAATATTTT TGAAGGAGA AA 332

20 SEQ ID NO:3747  
SEQUENCE LENGTH:177  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS04406

25 SEQUENCE DESCRIPTION:  
GATCTNNATA CTGTGAATAG CAGAATGTAC AGATGAAGAA TATTAATAATN AGGGGCGTCC 60  
ACTCAAAAC ATATACCAG AGTGACAAC TCAGCCCTCA GCCTCTGCAA TCCATATATA 120  
TNCTGGTCTT GGGAGTCCAT AGAATACTGT TTCCTTCTAA TAAAGGTTTC AAACAAA 177

30 SEQ ID NO:3748  
SEQUENCE LENGTH:186  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
35 CLONE:HUMGS04407

SEQUENCE DESCRIPTION:  
GATCAATAAT AGTACCTTTN ATTATACATT TATTATTGTN TCTCTCTCTG ATGTACTGTG 60  
GATTGTACAT TTAACCTTTG AATGGCTTTG TAATAATCAG TCTTAAGAAA ATNTTGACAA 120  
40 GCTCTGGTTG CTTATTTTAA GAAAATAAGG ACATTTAATA ATAATAAAAA AAAAGGGATT 180  
AATAAA 186

SEQ ID NO:3749  
45 SEQUENCE LENGTH:175  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS04408

50 SEQUENCE DESCRIPTION:  
GATCCCCAGT GGATGCCTGA AACCGCAGAT AGTACTGAAC CTTATATATA CTGTTTGTGT 60  
TCCTATGCAT ACATATCCCT ATGATAAAGT TTATGAATTT GGCACCTAAC AGCAGAACTA 120

55

ATAAGATGAA AGAGTTGTAA CAATATACTC TAATAAAAGT NATTTAAAT GTAAA 175

SEQ ID NO:3750

SEQUENCE LENGTH:172

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04409

SEQUENCE DESCRIPTION:

GATCAACAAT GAGCAGAAAC ATCATCAGTC CTTCCAAGG ACCATGGCGT TTAATGTCTT 60  
GGGCACCCCT TGGAAATCAC AGAAAGTCAG CNGTACTGGC CGTGTGGAAC TTNCATCCCA 120  
AGACCTACTT TNCAACTGAG TAAGAAGGTC ATTGTGCCN CTGCATTNNN NN 172

SEQ ID NO:3751

SEQUENCE LENGTH:107

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04410

SEQUENCE DESCRIPTION:

GATCAAAAAA TGTTATNCT GAATTCTNTA ATTTAAAAA NTCATACCTA TNAGGTGTGC 60  
TACAGGAATT CAGATACAAT AAGTTGCATA TAAAACCCGA CCTCANN 107

SEQ ID NO:3752

SEQUENCE LENGTH:169

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04411

SEQUENCE DESCRIPTION:

GATCTGACCA ACAAGGCCAC AGGAAAATTA ATAGCACAAG GAAGACACAC AAAACACCTG 60  
GGAAACTGAG AGAACAGCAG AATGACCTAA AGAAACCCAA CAATGAATAT CAAGTATAGA 120  
TTTGACTCAA ACAATTGTAA TTTTGAAAT AACTAGCAA AACCAGAAA 169

SEQ ID NO:3753

SEQUENCE LENGTH:167

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04412

SEQUENCE DESCRIPTION:

GATCTNCTTG GCCAGCAGGA CGTCCAAGGA CCAGAGCCTG TGTCTGTCC TNGAACAGGT 60  
NTGCGGCGTC CTCAAGCAGG GGAGCTGAGC CTTCCANAGG CAGGGTGGG TCCAGTTGTC 120  
TTGAGGGTCC GGATGGGCTC AGGTAATAAA GAAACGGAAG CAGCAAA 167

SEQ ID NO:3754

SEQUENCE LENGTH:168

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear



# EP 0 679 716 A1

CLONE:HUMGS04414

SEQUENCE DESCRIPTION:

5 GATCTGGGCT GTGGGGCCCT TGGGCCACGC TCTTGAGGAA GCCCAGGCTC GGAGGACCCCT 60  
GGAAAACAGA CGGGTCTGAG ACTGAAATTG TTTTACCAAC TCCCANGGTG GACTTCAATG 120  
TGTGTATTG TGTAAATGAG TAAACATTT TATTCTTTT TAGGTAAA 168

SEQ ID NO:3755

10 SEQUENCE LENGTH:162

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04415

15 SEQUENCE DESCRIPTION:

GATCTATGAT TTATNATGTC TTAATAGACC CTAAATTGTT CTTTAATTAC AAGAGTGGCA 60  
GTCTCTGAAG TCATTTGTGA GCTTGTATGA CTTTGTATT TAGCAATGTT GCATGCTCAC 120  
ATAATTGAAA ATTAAAAGTA ACACATTTT CTGAAATGTA AA 162

20 SEQ ID NO:3756

SEQUENCE LENGTH:161

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

25 CLONE:HUMGS04416

SEQUENCE DESCRIPTION:

GATCAAAACA TAATTGTTTT AATTCTACAG CTGTAGGAGC TTTGTATTGC TGAACTTTCA 60  
TCTGAAAAG TTTCACAGTG ACATTTTAA AAGAGAATT TTTTATCTGC CGAATTCTAC 120  
CAGTGTAAAC TTTTNTAA ATAAACAATA GTTTNTCAA A 161

30

SEQ ID NO:3757

SEQUENCE LENGTH:160

SEQUENCE TYPE:nucleic acid

35 TOPOLOGY:linear

CLONE:HUMGS04417

SEQUENCE DESCRIPTION:

GATCTCAAGA AGCCCCACAT CTTCTAAGG GGCCCATGG CCTNNTTGG GNGCAGGGTA 60  
GGTCTGGGG CACTGTGGG CGCCTGCCTG CTGATGTGG CTCTAGGCCA GCTTGTGTC 120  
40 ACGTACGTGG TGTGAAATAA AGCCCAAGCA CTNGTGAAA 160

SEQ ID NO:3758

SEQUENCE LENGTH:160

45 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04418

SEQUENCE DESCRIPTION:

GATCCTGGGT GACTTTGGGT GCACAGGGTG ACCGAGCATT TCTGCCCTG TGAATGTGGC 60  
ACTAACACTG TGCATGTCT CCACCAAANA AGGTTCCAC TGAGTTTCT CTCATGTTAC 120  
50 TGGGTTTGT AATGAATAA CACATTTTAA CTA CTCTCTAAA 160

55

SEQ ID NO:3759

SEQUENCE LENGTH:158

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04419

SEQUENCE DESCRIPTION:

GATCAATAAG AAGANCCTAG TCTAGAGACA ATGATGCTAG TTTGCATATG TTTTCCTATG 60  
 CAATAGTTGT TTTCCAGTN ATNCAAAGCA GCTTTCTATA TGTAGAGATG CAAATNATTA 120  
 AGTTGTTNCC AATACAATAA ATAAAAGCAT CNGTTNTN 158

SEQ ID NO:3760

SEQUENCE LENGTH:158

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04420

SEQUENCE DESCRIPTION:

GATCAGATTT GTAATTTNCC TGTATTAAAT GCCTAGAACT CTACAGTCAA CAGATGGCGC 60  
 TCTAGTTCCA ATTGTNACAG AAGTNCCTCG CCCATCCGCA AGCAAAGCGT TGTTTTCATC 120  
 AGTGAAAAGA GAATAANCAC TGTGCTTTAA CTTTTAAA 158

SEQ ID NO:3761

SEQUENCE LENGTH:290

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04421

SEQUENCE DESCRIPTION:

GATCTGTATG GACTATATAA ATACTTATTT NATAATTCTG TAACCGTATG GCAGTGTAT 60  
 GCCAAAAATG TATAAGAGC AATAGTTTT GTTGCTTACT GCTGTATTT AAAATATTGT 120  
 TTCTAAAATA ATAGNGTTAG AGTTCCTTTT GAGTAATTAT TTTTAAGGAC TATTGCCAAA 180  
 TATACATCCT GTAAACCTA ATAAAAGCCA CTCCATCTTT NGGTAACCAT TTTAGCATTT 240  
 GTGCTTGGNG TACATNNTGG GTGGTTTTTG CNCGNTTAA NANTTTANN 290

SEQ ID NO:3762

SEQUENCE LENGTH:158

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04422

SEQUENCE DESCRIPTION:

GATCCCCC TCTNTCCAC CTGGGCGNACT GACGCTCTGG CCTCTNTGGN AATNACACTG 60  
 GGCTGACCTG GCATTGGGAG AGGGAGGGAG GAAGGAAGGG AGGGAGGGGC TGGAAGATAC 120  
 TGAAGGATTC CTTTTNAAA GGTTTTTTT ATTGTAAA 158

SEQ ID NO:3763

SEQUENCE LENGTH:157

EP 0 679 716 A1

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04423

5 SEQUENCE DESCRIPTION:

GATCCAAGTC CCCTGCCTGG TCCCCACAA GGNCTCCCAT CCAGGCCCC TCTGCCCTGC 60  
CCCTTGTNAT GGACCATGGT CGTGAGGAAG GGCTCATGCC CTTATTTAT GGGAAACCATT 120  
TCATTCTAAC AGAATAAAC GAGAAGGAAA CCAGAAA 157

10

SEQ ID NO:3764

SEQUENCE LENGTH:157

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

15

CLONE:HUMGS04424

SEQUENCE DESCRIPTION:

GATCATTTN CATCTGTNCA TAGCGTTTCT NCAGAAGGAA CAGTAGTCTC AAATCTTTCC 60  
TCATAATGAT AACAAAATGC TCTGTCATGA TTTNTAACA ATATATTTAA NCAGGAAGTT 120  
GTCCTGATA TACTTTATTA AAAGGATTTT AATCAAA 157

20

SEQ ID NO:3765

SEQUENCE LENGTH:161

SEQUENCE TYPE:nucleic acid

25

TOPOLOGY:linear

CLONE:HUMGS04425

SEQUENCE DESCRIPTION:

GATCGTGTGT TGCCATTNG TCTGGCTGTG GCCCCTCCTT CTCCCCTCCA GACCCCTACC 60  
CTTTCCCAA CCCTTCGGTA TTGTNCAAAG AACCCCTC CCAGGAAG AACAAATATN 120  
ATTCTCTCT CCCAAATAAA CTCCTTAACC ACCTAGTCAA A 161

30

SEQ ID NO:3766

SEQUENCE LENGTH:156

SEQUENCE TYPE:nucleic acid

35

TOPOLOGY:linear

CLONE:HUMGS04426

SEQUENCE DESCRIPTION:

GATCTTGAGG TTGTTTGATG CTTTAAATTT TTNAATTATA TTATTTNNTA GGTGTTTATT 60  
GGTACATTGC AGTTTTTTT TTNAATTTA AAAATTTCTG TAAACTTTG TNTTCAAGTA 120  
ATCTGACAGC ATTAAATATT GCATTTAAAA ATTAAA 156

40

SEQ ID NO:3767

SEQUENCE LENGTH:155

SEQUENCE TYPE:nucleic acid

45

TOPOLOGY:linear

CLONE:HUMGS04427

SEQUENCE DESCRIPTION:

GATCCGCAAG AACAAGTACC GCCCGACCTG CGCNGGCAGC CATCCGCAGG CCAGCGCATC 60

50

55

CTGCGACAGA AGCCTGTAAT GGTAAGAGAA GCGACCCGCC CACCAAGAGT CCTGAGCCCC 120  
TGTCCAGAGA ATAAAGCAGC TGGCTTTCTA CCAA 155

5 SEQ ID NO:3768  
SEQUENCE LENGTH:155  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear

10 CLONE:HUMGS04428  
SEQUENCE DESCRIPTION:  
GATCCCAAAA CATCATNAGG CATTTTNAAG TTGGTCACGT CGCAAGTCCG ATATCACAAC 60  
TTAATTGTAA AAGGAGGGAA TCTGGTTTTG TNACTTGGCA GTGGTTTTTT CTCACCCTTC 120  
CTTTTAAACA ATAAATCCC ATTTGGGTCT TGAAA 155

15 SEQ ID NO:3769  
SEQUENCE LENGTH:155  
SEQUENCE TYPE:nucleic acid  
20 TOPOLOGY:linear  
CLONE:HUMGS04429  
SEQUENCE DESCRIPTION:  
GATCTATTG ATAATTTNT GGGTTTTTG AAGAATTAAT GAGCATGTAC ATAGAAATAG 60  
TGACTGCTTG ANTACTGTAT TTNCTTGAC TCTTTCAGTA CATCAAGATT CCTGTATATN 120  
25 TNAGNGTATA ATAAACACA GATGTGAGTT GTAAA 155

SEQ ID NO:3770  
SEQUENCE LENGTH:153  
30 SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS04430  
SEQUENCE DESCRIPTION:  
GATCGGCACA AGATGCTCAG CTAGATGGGC TGGTGTGGTT GGGTCAAGNN CCCAACACCA 60  
35 TGGCTGCCAG CTTCAGGCT GGACAAAGCA GGGGGCTACT TCTCCCTTC CTCGGTTCCA 120  
GTCTTCCCTT TAAAAGCCTG TGGCATTITT AAA 153

40 SEQ ID NO:3771  
SEQUENCE LENGTH:153  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS04431  
45 SEQUENCE DESCRIPTION:  
GATCTGAAGT GTGAGTAGAA TGTATTCAGC TGTTTAACAT GTAGTTTGA TATTCAAAAG 60  
TATGCATGTA GAGTTTAAAG AATATGTAA AANTNATTAA TTTTAATATT TTGTTTGGAA 120  
AAGCATGTTA TAATATAATG TTTTCACTAT AAA 153

50 SEQ ID NO:3772  
SEQUENCE LENGTH:152

55

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04432

5

SEQUENCE DESCRIPTION:

GATCTGGNAC TCCTTGTAAGT AAGCTGTTTT CTGCTCAGCC ACTGGGCTCT TTCACITTTT 60  
TAGTTCTTAA AAATTTATTT TTAAGTTCTA AAATAAAATA AAAATAAGTT CTTAAATTT 120  
ATTTTTTCC NGATAAAATT GTATTTGGTA AA 152

10

SEQ ID NO:3773

SEQUENCE LENGTH:151

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

15

CLONE:HUMGS04433

SEQUENCE DESCRIPTION:

GATCGCAAAT CACAGCTCAG ACAGCCAGCT CTTAAGTGAG ACCTGAGTGC CAGAGAGGGG 60  
TGGATACAAG GCCAACAGTT ACTAAATGAA TGAAAATTGT GATTCCGATG AAGCCTGCCA 120  
GAGAAATAAA GCATTTTTTA AAAGATGGAA A 151

20

SEQ ID NO:3774

SEQUENCE LENGTH:151

SEQUENCE TYPE:nucleic acid

25

TOPOLOGY:linear

CLONE:HUMGS04434

SEQUENCE DESCRIPTION:

GATCTAGCCA TAAACTAGT AATCTTGAAT TCCTCTTGAG CTGGATGGTG ATTAGCCATT 60  
GTGAAAACAG ATTATATGGA AATTGTGCAT ATTGCTAAAT TTTAAAACAT GGATTTATCA 120  
ACTGATAATA AAATATATCT TACAAGATAA A 151

30

SEQ ID NO:3775

SEQUENCE LENGTH:151

SEQUENCE TYPE:nucleic acid

35

TOPOLOGY:linear

CLONE:HUMGS04435

SEQUENCE DESCRIPTION:

GATCTTTAGC TGCCTTTGTA TCAACTTCTN TGGAGCTTAT GTGATTTTCC AGAAAATATC 60  
CAAGGCATAG TTTTGTCCT AAGTCCCATG AATATGTAAT ATNTNGTGTC TCTCTATTAA 120  
AATAGCACTT TTNGTGCATN CCATTAACAA A 151

40

SEQ ID NO:3776

SEQUENCE LENGTH:150

SEQUENCE TYPE:nucleic acid

45

TOPOLOGY:linear

CLONE:HUMGS04436

50

SEQUENCE DESCRIPTION:

GATCCATCAA AAGGTTCTTT TTNATAATC CCTTTTGAAA ATAATAATCA AAGGAAGAGA 60

55

TGTGGTGT TT GGCATGTGG AAAACTCAAT GTATAATTAA GACGTCTNTC AAAAATCCGA 120  
 CAAATAAAAT NAAGCTGGAA CGAAGGCAAA 150

5 SEQ ID NO:3777  
 SEQUENCE LENGTH:146  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear

10 CLONE:HUMGS04437  
 SEQUENCE DESCRIPTION:  
 GATCCNAAAG CACACCAGGA AGATGCTAAA GATGCTTATA CTTTCTCTCA AGAATTGAAA 60  
 GAAAAACCCA AAGAAGAGCC AGGAATACCA GCAATTCTGA ATGAGAGTCA TCCAGAAAANN 120  
 NNNGTCTATA GTTATGTTTT GTTCNN 146

15 SEQ ID NO:3778  
 SEQUENCE LENGTH:168  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 20 CLONE:HUMGS04439  
 SEQUENCE DESCRIPTION:  
 GATCAGAGAA GTTATGCTC ACTGTCTGAT GCAACTNTCT GGTCTATTTG TNAGTAAATA 60  
 ACAGGGAAT CATTTCCTCT TTTTGTTAAA AATAAGGTAT TTACAAGCAT ACCTTGTAAGT 120  
 25 TATTGTGGGT TCAGTTTCAG ACCACTGCAA TAAAGTGAAT ATCTCAAA 168

SEQ ID NO:3779  
 SEQUENCE LENGTH:149  
 30 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04440  
 SEQUENCE DESCRIPTION:  
 GATCTGACCC ACCAGTTTGT ACATCAGGTC CTGCATGTCC CACACCATT TTTTCATGACC 60  
 35 TTGTAATATA CTGGTCTCTG TGCTATAGTG GAATCTTTGG TTTTGCATCA TAGTAAATA 120  
 AAATAAACCC ATCATTGGA GAACATAAA 149

40 SEQ ID NO:3780  
 SEQUENCE LENGTH:144  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04441  
 45 SEQUENCE DESCRIPTION:  
 GATCGGGACC TGACCTGGGG CTGGCCTCAG GCCCACGTGC ACGTAACTGC CCTCTGTGGA 60  
 AGCCAGCTTA AACCCTAGCC CTNTNAGAGC TTCCTGTGCC CAGCAGGAAG GAAGTCAAAT 120  
 AAACCACACT GACTACCTGT GAAA 144

50 SEQ ID NO:3781  
 SEQUENCE LENGTH:144

55

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04442

5

SEQUENCE DESCRIPTION:

GATCTAGGGG GAAAGAGGAG CATTTCATCAC AAGTTTCCTA GAGAGAGGAG ACAAATCGGT 60  
GTGCCATTGA CAACATGAGC CAGGGTAAAG GCACCCTTNN NNNTTACTGA TTTCAAAGAT 120  
TAATAAAGTA ATTCTATTTT TAAA 144

10

SEQ ID NO:3782

SEQUENCE LENGTH:139

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

15

CLONE:HUMGS04443

SEQUENCE DESCRIPTION:

GATCTATGAC TCATTTGACA GAGAAGCCAA GGAAAAAAG CTGCTTGGC CCATTAAGTC 60  
AAATCCACCA AATACITTTG TCTAAGTTCT CATTCTTTCA ATTGTTATGC ACCAGAGATT 120  
AAAAAGCTTT AACTATAAA 139

20

SEQ ID NO:3783

SEQUENCE LENGTH:137

SEQUENCE TYPE:nucleic acid

25

TOPOLOGY:linear

CLONE:HUMGS04445

SEQUENCE DESCRIPTION:

GATCTGTGTC TTGAAGCAGC TGCCCTCATT CCGACTTCAG AAAATCGAAG CAGCTGGCTC 60  
CTCCCCTTGT TCTCTCTCCC ACCCTCCCCC AAATCTGTTT TCATGTAAAA GACAAATAAA 120  
TGATGACTTC CCCCAA 137

30

SEQ ID NO:3784

SEQUENCE LENGTH:137

SEQUENCE TYPE:nucleic acid

35

TOPOLOGY:linear

CLONE:HUMGS04446

SEQUENCE DESCRIPTION:

GATCAAATA AAAATGTACA TGACGGGGAA GGGAAAAACC TGTGGAGTT GCTTCCAGCC 60  
AGCCACGCTC CGGGCCAGCA TGTGGAATC CAGCGTGGAG CAGATGCAGT AAAAATATGG 120  
TTGGTTTCTG TGTGAAA 137

40

SEQ ID NO:3785

SEQUENCE LENGTH:137

SEQUENCE TYPE:nucleic acid

45

TOPOLOGY:linear

CLONE:HUMGS04447

SEQUENCE DESCRIPTION:

GATCTCTCTC TCNTTTTACC CCCCTTAGGC TGAGGGTAAA AAGCTGGGAT TGGTAGGCTG 60

50

55

GGTCCAGAAC ACTGACCGGG GCACAGTGCA AGGACAATTG CAAGGTCCCN TCTCCAAGGT 120  
GCGTCATATG CNGNNNN 137

5 SEQ ID NO:3786  
SEQUENCE LENGTH:133  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
10 CLONE:HUMGS04448  
SEQUENCE DESCRIPTION:  
GATCGGCCAA GTATGCTNTT NTTAGAGCA ATGTTTGGCC CTAGAGANTT GTAAAATTTA 60  
TGTNATGACT CAGTACATAT GTGTCGTAC ATATATGATN GGAATAAAAT GTTATGAAA 120  
TATTNACTCA TAN 133

15 SEQ ID NO:3787  
SEQUENCE LENGTH:132  
SEQUENCE TYPE:nucleic acid  
20 TOPOLOGY:linear  
CLONE:HUMGS04449  
SEQUENCE DESCRIPTION:  
GATCTGTGTG ACCTCACCTG CATTGATTG AAAAAAGTAT GCGCGTAATT GTACCCACCC 60  
AGTTCAAACC CGTGTGTAAG GGTCAACTGT AAAAAAAGT TTGTGAAATA AACGTACTGG 120  
25 AGAATCTTTA AA 132

SEQ ID NO:3788  
SEQUENCE LENGTH:130  
30 SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS04450  
SEQUENCE DESCRIPTION:  
35 GATCAGTATT TAANATTATA CCAGTTTNA TTAAACCCTT TCCCTCCCG ATAAAGAATG 60  
TTCTATTCT GCCTCCCTT AAAGGGGAGA CCTCAGAAGT AAAGNAATTT NATGTTGTGT 120  
TTTTNTTAAA 130

40 SEQ ID NO:3789  
SEQUENCE LENGTH:129  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS04452  
45 SEQUENCE DESCRIPTION:  
GATCCCCCTT CACCTTTTGC CATGGTCATA AGCTTCCTNA GGCCTCCCTG GAAGCTGAGC 60  
AGATGCCAGC ACCATGCTTC CTGTACATCC TGCAGAACCA TAAGCCAATT AAACCTTTTT 120  
AATAATAAA 129

50 SEQ ID NO:3790  
SEQUENCE LENGTH:129

55



SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04453  
 5 SEQUENCE DESCRIPTION:  
 GATCCNCCAT GGTGGACACG TCTGTNCTGT ATGTAAAAGG CATTACAAAT GTTTTTTAGC 60  
 AGATGAGACT TGAAGCCTTT CCACAGTCCT TGTNCTCTGA GATGGCTGTN GAGCTCTGCT 120  
 CANCTGTTN 129

10 SEQ ID NO:3791  
 SEQUENCE LENGTH:126  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 15 CLONE:HUMGS04454  
 SEQUENCE DESCRIPTION:  
 GATCCCTACC CCTCANCAAC TAGCTCCCCT GTCGGCCAGC TAAGAGAGCT GGGACANTGG 60  
 AGGCTGGCAG AAGCTGAGAC GTGACTGTCT AGGAGTAACA CTCATTAAAG CTTTCNTTTT 120  
 20 GGCAAA 126

SEQ ID NO:3792  
 SEQUENCE LENGTH:126  
 SEQUENCE TYPE:nucleic acid  
 25 TOPOLOGY:linear  
 CLONE:HUMGS04455  
 SEQUENCE DESCRIPTION:  
 GATCTGAAAA AGCAACCCAT TTCCTAAATT CATATTTTNC CTAAACTTT ACTATGTTTT 60  
 30 NATTTTAAGA GGTTTCCTGT TATATACACT TTTNACACAT GCAAATAAAC TTTATACCAA 120  
 GTGAAA 126

SEQ ID NO:3793  
 35 SEQUENCE LENGTH:126  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04456  
 SEQUENCE DESCRIPTION:  
 40 GATCTGTTTA GAAAATACCT TTGAAAACGA GGGTAACTTT AAAAAATGGA AACTTTCAAA 60  
 TCCATTTATA TTTTNNTTAT AANCAAACT TAATTAAAAG TTTAACAAAC TGGCTGAAAA 120  
 CTCAAA 126

SEQ ID NO:3794  
 45 SEQUENCE LENGTH:126  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04457  
 50 SEQUENCE DESCRIPTION:  
 GATCACTGAG CTGCCCNTCA AGGGGACCTG GANNCCGGGT CCTGGGGTCA TGCTGCCTCC 60

55

EP 0 679 716 A1

NAGGCTCCAA GGTGAGGGTC ATCTTCACGA GCAAAGAGAA CCAATAAAGT GACAACGNAC 120  
GTCAAA 126

5 SEQ ID NO:3795  
SEQUENCE LENGTH:123  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
10 CLONE:HUMGS04460  
SEQUENCE DESCRIPTION:  
GATCCAGGGC TTTCGAGGCC TCTCCTCATT GAGTTCAGAG TCACATATCA GAGGNTTAA 60  
TCCAAAAGAA ATATGCACAC CCCTCTCCTC CCTCCCAGTA AAAATAAATC GCTCCTCTTG 120  
AAA 123

15 SEQ ID NO:3796  
SEQUENCE LENGTH:125  
SEQUENCE TYPE:nucleic acid  
20 TOPOLOGY:linear  
CLONE:HUMGS04462  
SEQUENCE DESCRIPTION:  
GATCTCTGTG CTGTAAACTA AAACAAATTG TGCATTCCTT CCGGGGCCAT CGTCTTTGTT 60  
TTCTTTTTTG TCTTGAATGA ATTTTAAAG GAAATATATA ATAAAAATGT TAACCAGAAG 120  
25 GTAAA 125

SEQ ID NO:3797  
SEQUENCE LENGTH:119  
30 SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS04463  
SEQUENCE DESCRIPTION:  
35 GATCTGGGGG CCCCCCAGC TGGCGGGAAC CCCAAATGGA CACAACTGT ACATTGCCA 60  
ATGGGTTTTT TTCAGACCAT GGTTTTTACT TGCAAATAAA CCTGAGTTCT TTTCTGAAA 119

SEQ ID NO:3798  
SEQUENCE LENGTH:133  
40 SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS04464  
SEQUENCE DESCRIPTION:  
45 GATCTAAAAN NATACTNTGT TCCCTCATAT GCATGCCCTT CCTTTCTATA TCCTTGACAC 60  
CTTACTTTCC CATTGTAACA ATAAAAAAG TATCAATAAA ATAATTATTG GCAAATAAAT 120  
TGGTGAGTTG AAA 133

50 SEQ ID NO:3799  
SEQUENCE LENGTH:119  
SEQUENCE TYPE:nucleic acid

55

EP 0 679 716 A1

TOPOLOGY:linear

CLONE:HUMGS04465

SEQUENCE DESCRIPTION:

5 GATCCTGCAG TGATGGAATG TTCTGTCTTG ATTGTAGCAA CACCAATATN CTGATTGTNA 60  
TATTATACTA TAGTTTTGCA TAACAGTTAC CATTAAAGGA AATTGGGTAA AAGGCTAAA 119

SEQ ID NO:3800

10 SEQUENCE LENGTH:118

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04466

SEQUENCE DESCRIPTION:

15 GATCTCTTAG CAAATAGGAA TCTAGGTGTA GAATTATAC ACATATATAT TTTTAAAAGT 60  
ATAAAAATGA GAAAGTATGT ACAAAAAATC ATCCTAAATC TTAGAAAAGGA GACATAAA 118

SEQ ID NO:3801

20 SEQUENCE LENGTH:117

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04467

SEQUENCE DESCRIPTION:

25 GATCTGGGAG CCAGCAGCTG GATGCTGTGG CTGGCCAGAN ACACCTCCAG GCTGTGGCCT 60  
GGGGGGTGGG GGGAGCCCCA GGCTGAAAAG GGTCCAATTA AAACAAATGG AGCCAAA 117

SEQ ID NO:3802

30 SEQUENCE LENGTH:117

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04468

SEQUENCE DESCRIPTION:

35 GATCACATTC CAGCCCTCGC TGCTGGGGTG CACACCCCTT CCTTAGNTGA TGTGCTTGGG 60  
AAACTCCCTC CCCCTCCTTC CCAAGAGAGA AATAAANCA CCTTCGCCTA GGNCAAA 117

SEQ ID NO:3803

40 SEQUENCE LENGTH:116

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04469

SEQUENCE DESCRIPTION:

45 GATCCTGACC TCCTCCAAGG AAGAAATCCA GAAAGCCTTA AGACTAAGAC AACTTGACTC 60  
TGCTGATTCT TTTTTCCTTT TTTTNTTNN AAAANAAAAA TACTATNANC TGGAAA 116

SEQ ID NO:3804

50 SEQUENCE LENGTH:115

SEQUENCE TYPE:nucleic acid

55

TOPOLOGY:linear

CLONE:HUMGS04470

SEQUENCE DESCRIPTION:

5 GATCAGAACT CCAAAACCAC TCCCACCCCT GAAGGTCGGG AGGGTCTGAG CAGCCCTGGT 60  
GGCTNCTTGT GCTCAGGTCC TCAGTCCAT GGGAAATAAA AATGGCACCC TGAAA 115

SEQ ID NO:3805

10 SEQUENCE LENGTH:114

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04471

SEQUENCE DESCRIPTION:

15 GATCAACATA TTTAGCTTAT ACAGAAATAA AATTAAGTCA ATCCACTCAC AAAGAATTTC 60  
TATTTTGTA AATGTAGCT TGTATTTCAG TATAATAAAA TCTGATGTAA GAAA 114

SEQ ID NO:3806

20 SEQUENCE LENGTH:114

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04472

SEQUENCE DESCRIPTION:

25 GATCANAGCT NTCCCAAAGA GGGAAAGCGG TGAGGTTTNA GGAGGGGCAG AAGCAGGGCC 60  
GGCAAAGNTT GTACTNCAT AAGGTGGTAT GGGGGGTTGG GGTCAAGGCC TGAN 114

SEQ ID NO:3807

30 SEQUENCE LENGTH:112

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04473

SEQUENCE DESCRIPTION:

35 GATCGAAAGA CTCAGGGAGA GCGGTCTTNA CCACCTGGAA GTAAGTCCA CCTGGACCTT 60  
ATNAAAAC TA CTA CTCCAC CTGGGCCCT GCTGAAGCCN NNTTTTAAAA TN 112

SEQ ID NO:3808

40 SEQUENCE LENGTH:111

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04474

SEQUENCE DESCRIPTION:

45 GATCTGTTTC GTGCATTGGA AGACCCACCA CAAGCTTGGC ANACTAANTN TTGTATCCTG 60  
GGGCTCCNT CATCTCCAGG GAGACCAAAC CCCGGCCCTA CCAGNGCCCG N 111

SEQ ID NO:3809

50 SEQUENCE LENGTH:108

SEQUENCE TYPE:nucleic acid

55

EP 0 679 716 A1

TOPOLOGY:linear

CLONE:HUMGS04476

SEQUENCE DESCRIPTION:

5 GATCAAGACT AACAAATAAC TTTGTGATGA AAATNCTTCA AAAATATAGC TACTCTTTTC 60  
AAGTATACCA TTAAATATAT TTCATCAGGC AGAGCCCTGA CCAGGAAA 108

SEQ ID NO:3810

10 SEQUENCE LENGTH:108

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04478

SEQUENCE DESCRIPTION:

15 GATCAAGAAN ANTNAAGACA ACGAGAAAGT TTAAGGTTT GAAAGCAGCA AGATNCCTTT 60  
CCCCCTGGT CAATCCTGA CACAAGAGAA GGCAGAGACC CTGAAGCN 108

SEQ ID NO:3811

20 SEQUENCE LENGTH:182

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04482

SEQUENCE DESCRIPTION:

25 GATCTTCAAG CAAGGGAAAT GATTCTTAAA AGGATTATCT GAAATTGAAA AACTAGTAAG 60  
CAAATAAATG ATAAACATAA GTAAATTTAA NCTGTTGTTT GTATAAAACA ATTATAATGA 120  
NGTGTTTATA AGANATTGTA AACAAATGTA AANCTAAATN ANCATTGTTA TGCAACATTA 180  
AA 182

SEQ ID NO:3812

SEQUENCE LENGTH:105

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04483

SEQUENCE DESCRIPTION:

35 GATCTCCCA AACTAAAAAG TACAGTACTT GGAATTGTGT TCTTTATGGT TGTAAGTGTG 60  
GTAAAGCACT AATATGCAGA AAATAAGGA ATTACACAGT GCAA 105

SEQ ID NO:3813

SEQUENCE LENGTH:105

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04484

SEQUENCE DESCRIPTION:

45 GATCCNAAGC AGTGAACATG CTGTTAATAC TTGTAAGACT CCTAGCAAAC TGCATTTAAT 60  
TTTTTAAATT AGTTTATG TACATAAAGG CATGINTTTN CCAA 105

SEQ ID NO:3814

55

SEQUENCE LENGTH:105

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04485

SEQUENCE DESCRIPTION:

GATCCATGGG ATTNATAATT GAAATAGAGA TTGGAGACCC TCCTATTCAN TTCATAAGCA 60  
ATNGCACCAC AGGTCANATG CAGTTATCTN AACTCCAGGA AATTN 105

SEQ ID NO:3815

SEQUENCE LENGTH:104

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04486

SEQUENCE DESCRIPTION:

GATCTTGCTA AATTATTAGT TCTAGTAGCT TTTTGTAGA TTCATTAGGA TTTTNTACAT 60  
ACACAATCAT GCTATTGCA AATAAAATAA TGCTTTTATC CAAA 104

SEQ ID NO:3816

SEQUENCE LENGTH:104

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04487

SEQUENCE DESCRIPTION:

GATCGAGTCC AAGGNAGACT ATGTCCTCTN CTACCAACGN CAGGNCGTGG CGCGACGCCT 60  
GCTGTCCCCG GCCGGCTCAT CTGGCGCCCC AGCCTCCCCT GNCN 104

SEQ ID NO:3817

SEQUENCE LENGTH:103

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04488

SEQUENCE DESCRIPTION:

GATCAGCACT GTGGTGAGCT CCAAGGAAGT GAATAAGTTT CANATGGCTT ATTCAAACCT 60  
CCTTAGAGCT AACATGGNTG GGCTGAAGAA GAGAGACAAN NNN 103

SEQ ID NO:3818

SEQUENCE LENGTH:103

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04489

SEQUENCE DESCRIPTION:

GATCCCAAAC CTNAGCTCAA TCAGTATTGC CAGANAGGGG TAAGACTGGT TGGAAGCTGA 60  
CTGCAGACTT NNTTCCCCT TAGTATGTNC TGTGTTGTAA ATN 103

SEQ ID NO:3819

SEQUENCE LENGTH:102  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 5 CLONE:HUMGS04491  
 SEQUENCE DESCRIPTION:  
 GATCACTAAG CAAAGCTGCT AGTGGGATTC TATATTCGT GTCATCTTTT TTATNATAAT 60  
 NTATTGCAAA TATTTTCTG AATAAATATA TGTGTGTGA AA 102

10 SEQ ID NO:3820  
 SEQUENCE LENGTH:102  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 15 CLONE:HUMGS04492  
 SEQUENCE DESCRIPTION:  
 GATCCTGCCA CCAGGGTTNT TTTGAAATAG TACCACATGT AAAAGGGAAT TTGGNTTNA 60  
 NTTCACTAA TCACTGANTT GTCAGGCTTT GATTGATAAT TN 102

20 SEQ ID NO:3821  
 SEQUENCE LENGTH:102  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 25 CLONE:HUMGS04493  
 SEQUENCE DESCRIPTION:  
 GATCTTGTTT AATCGGAAAC CCCC GTTACC TCCTCTTTT CTTCTCTTT CTTTTTTTTT 60  
 TTTAACTNAA ANATTTTNAT GATGATTAAG ANGGAAGTNG TN 102

30 SEQ ID NO:3822  
 SEQUENCE LENGTH:102  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 35 CLONE:HUMGS04494  
 SEQUENCE DESCRIPTION:  
 GATCCCAAAC ACTCNATCCT GTAAGNCGGG TACAGTCCTA TTGTNTGTN NCACACTGAT 60  
 GATGTGAGCC TGTGAGATGA GCCAATCACC AGTTGTTATG TN 102

40 SEQ ID NO:3823  
 SEQUENCE LENGTH:101  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 45 CLONE:HUMGS04495  
 SEQUENCE DESCRIPTION:  
 GATCTCATGT ACTGAAAAA AATCTTAAT TTTATTGGAG TTTATACCAC TGTGAAACTG 60  
 CAATATGACT GTAAGAGAGT AAAAAGATTG TNACATCTAA A 101

50 SEQ ID NO:3824

55

EP 0 679 716 A1

SEQUENCE LENGTH:101  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 5 CLONE:HUMGS04496  
 SEQUENCE DESCRIPTION:  
 GATCTGGGAG TCTGAAATGG TAGCNTTTTG TCCCTGTCTT CACACTATCA TAGGGAGAAT 60  
 CAAAAGANCT AACAAATATA ANCATGCTTT GTGAATNNCC N 101

10 SEQ ID NO:3825  
 SEQUENCE LENGTH:100  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 15 CLONE:HUMGS04497  
 SEQUENCE DESCRIPTION:  
 GATCTNTTTT NTNTCTATTT TTTGAGGTAC ATGCTACATA CATTTTNTNT GTAAACAACT 60  
 ATTTAGCATA TTGAATAAAA TAACATTTTA AAAATAGAAA 100

20 SEQ ID NO:3826  
 SEQUENCE LENGTH:97  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 25 CLONE:HUMGS04498  
 SEQUENCE DESCRIPTION:  
 GATCCCACGG CNAACACTCA CCACNCGCTA CCATACGCCN TCCCAGAGCT AGGGGCTGCC 60  
 TTAAGGAAA TTGTAGCCTA AGTAGGTCAT GGCAAGN 97

30 SEQ ID NO:3827  
 SEQUENCE LENGTH:96  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 35 CLONE:HUMGS04499  
 SEQUENCE DESCRIPTION:  
 GATCAGCCAC ATCAACTCAG TTGTCCACCA CAGGGGAATT TTNAATGTCT TTTGTTTTTG 60  
 TTTGTTTTTG AAAAATAATA AACAGGCAAC TGTAAG 96

40 SEQ ID NO:3828  
 SEQUENCE LENGTH:95  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 45 CLONE:HUMGS04500  
 SEQUENCE DESCRIPTION:  
 GATCTATTTG GCCTCTCAA TGAAGTGA TCCCTGTAA AAAAGATTGA TGTTATTGTC 60  
 TCTTGTAGAG GAAACTAATA AAGCTGCAGG NGAAA 95

50 SEQ ID NO:3829

55



EP 0 679 716 A1

SEQUENCE LENGTH:94

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04501

SEQUENCE DESCRIPTION:

GATCTATCAT AATTGCTTTT CTGATGCATT TAAAAATAAA TGGAACACTT AAATGTATAT 60

TACCGATGCA AACTGTGGAT AAAGTTGAAA GAAA 94

SEQ ID NO:3830

SEQUENCE LENGTH:94

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04502

SEQUENCE DESCRIPTION:

GATCACAGGC CTGGCCGCGG TAACAGACTT TTACATGGAA TTGTTTAATT ATTTGTACTT 60

TTCATGCCAG AAAATAAAAG TTCAGAATCT TAAA 94

SEQ ID NO:3831

SEQUENCE LENGTH:94

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04503

SEQUENCE DESCRIPTION:

GATCACTACG ATTAACGACG GTCGTAATGT TAAGACGTCG TCTCCATGAN CTTTGGGGGG 60

ACTTTAATNT GGAATAAAGA AACTATCACT NAAA 94

SEQ ID NO:3832

SEQUENCE LENGTH:93

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04504

SEQUENCE DESCRIPTION:

GATCCAGATN AAGTGCTGAA GAAAAGAAAA AAGAAAGTGA GAAGAGTATG NTTATNCTTC 60

TCCTTATTAA AGAAATTTNC TCAAAACAGC AAA 93

SEQ ID NO:3833

SEQUENCE LENGTH:88

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04506

SEQUENCE DESCRIPTION:

GATCTATCCA GTGACGTGGC CTGGTGGGCG TTTCTCCTTG TACTTATGTG GTTTTTTGGC 60

TTTNAATACA GACATTTTCC TCCAGAAA 88

SEQ ID NO:3834

EP 0 679 716 A1

SEQUENCE LENGTH:86  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
5 CLONE:HUMGS04507  
SEQUENCE DESCRIPTION:  
GATCCCAAAA TATGGTAAAG TGAACCCATC TGTCTGCATT TTCTACTCTG AGCCCATTTG 60  
TTAATAAACA CTTATTTTTA TATAAA 86

10  
SEQ ID NO:3835  
SEQUENCE LENGTH:84  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
15 CLONE:HUMGS04509  
SEQUENCE DESCRIPTION:  
GATCCGGGCC CCAGGCTGCT GCCGCTTTT ATAACCTTAT ATTATTTTNN TTTTAAGAAA 60  
AAAAGCTCTT TAAAATACCT CAAA 84

20  
SEQ ID NO:3836  
SEQUENCE LENGTH:82  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
25 CLONE:HUMGS04510  
SEQUENCE DESCRIPTION:  
GATCTGAGGA GCAAACCTCC GTGGCACACA TTTACCTGCA TAACAAACCT GCACATCCTG 60  
CATGTGTACC CCAGAACTTA AA 82

30  
SEQ ID NO:3837  
SEQUENCE LENGTH:81  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
35 CLONE:HUMGS04511  
SEQUENCE DESCRIPTION:  
GATCCAGGAG GCTCAAAGAG AAGCCAAGTC AGCTTTGTTG TGATTGATT TTTTTTAAAA 60  
AACTCTTGTA CAAAACGAA A 81

40  
SEQ ID NO:3838  
SEQUENCE LENGTH:81  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
45 CLONE:HUMGS04512  
SEQUENCE DESCRIPTION:  
GATCGCTACT GTTATGTGGG ATTATTATTT CTAAATNTTA CTCATTGAAA TAAGCATACA 60  
ATAANANGCA TTTATTGCAA A 81

50  
SEQ ID NO:3839

55

SEQUENCE LENGTH:80

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

5 CLONE:HUMGS04513

SEQUENCE DESCRIPTION:

GATCAAAACA AGACCCAGCT TATTTTCTGC TTGCTGGTAA ATTAAGCAAA CATGCTATAA 60

TAAAAACAAA ATGAAGGAAA 80

10

SEQ ID NO:3840

SEQUENCE LENGTH:78

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

15

CLONE:HUMGS04514

SEQUENCE DESCRIPTION:

GATCTGGTTG AAAATTGTAT TTCTATGTAA ACTCAACGAT ATGTTTGGTT TTCCTGAAAA 60

TAAATAATTT TAAATAAA 78

20

SEQ ID NO:3841

SEQUENCE LENGTH:75

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

25

CLONE:HUMGS04515

SEQUENCE DESCRIPTION:

GATCCTCACA CCTCAGCGTC CCAGAGTGCT GGGATTACAG TTGTGAGCCA CTGTGCCTGG 60

CCTTTTTTTT TTTT 75

30

SEQ ID NO:3842

SEQUENCE LENGTH:74

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

35

CLONE:HUMGS04516

SEQUENCE DESCRIPTION:

GATCAGAAAT CTGAGGTTCA ATGAGGCCAG AATAACTCAG CTTCAAAATG AATAAATGTG 60

GAAGCCAGCA CAAA 74

40

SEQ ID NO:3843

SEQUENCE LENGTH:72

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

45

CLONE:HUMGS04517

SEQUENCE DESCRIPTION:

GATCTCCCCT TGGACTGATA CCCTTTTCCC ATTCATTCAC AAATAAATTA CAATGGGTGC 60

TGAGAACTTA AA 72

50

SEQ ID NO:3844

55

EP 0 679 716 A1

SEQUENCE LENGTH:78  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
5 CLONE:HUMGS04518  
SEQUENCE DESCRIPTION:  
GATCTGTGTC ATGGTTTAT AACCTTTNTN TNTTTGTAAA CTGAATGTT CAAAATTAAC 60  
ATGCTGTTTA CTCTGAAA 78

10 SEQ ID NO:3845  
SEQUENCE LENGTH:71  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
15 CLONE:HUMGS04519  
SEQUENCE DESCRIPTION:  
GATCAGGAAG AACTAAACAA AACCCACACT CAAAAACTA ACAAAGAATA AATAAATAAT 60  
ATAAAAAATAA A 71

20 SEQ ID NO:3846  
SEQUENCE LENGTH:71  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
25 CLONE:HUMGS04520  
SEQUENCE DESCRIPTION:  
GATCTCAGAA CAGANTTAAA ATATTGTGAA AATTACAGCT TAATAAATGT TTATTGTAAT 60  
TTTNTTGTA A 71

30 SEQ ID NO:3847  
SEQUENCE LENGTH:69  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
35 CLONE:HUMGS04521  
SEQUENCE DESCRIPTION:  
GATCTAGGAC TTGCCTTATT TTATCATTTT TCTTTAATAA TCTCCAATAA ACTTTCTTTA 60  
TTCATTAAA 69

40 SEQ ID NO:3848  
SEQUENCE LENGTH:69  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
45 CLONE:HUMGS04522  
SEQUENCE DESCRIPTION:  
GATCACCACT AAAGAACTTA CTCATATAAC CAAATACCAC CTGTNCTCCC AAAAACCTAT 60  
GGAAATAAA 69

50 SEQ ID NO:3849

55

SEQUENCE LENGTH:69  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 5 CLONE:HUMGS04523  
 SEQUENCE DESCRIPTION:  
 GATCAGTATG CTGTTTAAAT AATTATGTGC CATTTTAATA AAATGAAAGG GTCAACGGCC 60  
 CNNTTTAAA 69

10 SEQ ID NO:3850  
 SEQUENCE LENGTH:67  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 15 CLONE:HUMGS04525  
 SEQUENCE DESCRIPTION:  
 GATCTACACT GATGATTAAA TCAAATTGGC TAAGATTATT CGTTCTAATA AAAGCACTGA 60  
 CTCCAAA 67

20 SEQ ID NO:3851  
 SEQUENCE LENGTH:67  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 25 CLONE:HUMGS04527  
 SEQUENCE DESCRIPTION:  
 GATCTCTTCC TGTTTGTAC ATAGATTAT TTTTCAGTTC CAAGAAAGAT GAATACATT 60  
 TGTNAAA 67

30 SEQ ID NO:3852  
 SEQUENCE LENGTH:67  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 35 CLONE:HUMGS04528  
 SEQUENCE DESCRIPTION:  
 GATCTAGCAT ATGTATCTTT TTAAAGGTA TTGTTAATAA ATATNCTGTC ATTTGTAAAG 60  
 ATANAAA 67

40 SEQ ID NO:3853  
 SEQUENCE LENGTH:66  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 45 CLONE:HUMGS04529  
 SEQUENCE DESCRIPTION:  
 GATCCATCTT CAAATCAAGG GCTCCCTGGC TACCAAATNC TGTCTAGTAA AAATNATTCG 60  
 AGCAAA 66

50 SEQ ID NO:3854

55

EP 0 679 716 A1

SEQUENCE LENGTH:64

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04530

SEQUENCE DESCRIPTION:

GATCTATTCA ATGTACAAAA TATTTTGAAA GTTCTGTGA TTAAATGTNC TTGAAAACA 60

TAAA 64

SEQ ID NO:3855

SEQUENCE LENGTH:64

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04531

SEQUENCE DESCRIPTION:

GATCTGTTAT NAACACCTTT GTTGGCTTGG TTCAGTAATA AATATGTNAG ACTTTTCATT 60

TAAA 64

SEQ ID NO:3856

SEQUENCE LENGTH:62

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04532

SEQUENCE DESCRIPTION:

GATCTGTGTA AGCTCTGAAT GAACTTCTTT ACTCAATAAA ATTAATTTTT TGGCTTCTTA 60

AA 62

SEQ ID NO:3857

SEQUENCE LENGTH:61

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04533

SEQUENCE DESCRIPTION:

GATCCAAGAT ACGTCATTTT TGTATTGGCA AAATGCCACT ATTAAAGTGT AATTCTTGAA 60

A 61

SEQ ID NO:3858

SEQUENCE LENGTH:60

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04534

SEQUENCE DESCRIPTION:

GATCTCAAGT GCTTAATGAT AAGGTGTTGA CTTGTAAAT TAAACCATT GGAATACAA 60

SEQ ID NO:3859

SEQUENCE LENGTH:60

SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04535  
 5 SEQUENCE DESCRIPTION:  
 GATCAAAATGC CCTAAATGT AGTGACCCGT GAAAAGGACA AATAAAGCAA TGAATACAAA 60

SEQ ID NO:3860  
 10 SEQUENCE LENGTH:60  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04536  
 SEQUENCE DESCRIPTION:  
 15 GATCTGAGAC TTTGAGTCTC CAGAACTGTG AGAAAATAAA TTTCTGTTTC TTAAGCCAAA 60

SEQ ID NO:3861  
 SEQUENCE LENGTH:60  
 20 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04537  
 SEQUENCE DESCRIPTION:  
 25 GATCTTTCCT GTCTTCCCA AGTTTGCAAT TCCGACATTA AAGTTTACTT TTNAGTTAAA 60

SEQ ID NO:3862  
 SEQUENCE LENGTH:59  
 30 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04538  
 SEQUENCE DESCRIPTION:  
 GATCAATCAG GGAGAAAATA CAGAAGAGAA TAAAAGAGA CTCATTCAGT GGAAGCAAA 59

35 SEQ ID NO:3863  
 SEQUENCE LENGTH:59  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 40 CLONE:HUMGS04539  
 SEQUENCE DESCRIPTION:  
 GATCTGAATT AAGCTGTCTG CCATTTGGAG AAATTAAAT ACTATTTTAA ACACACAAA 59

45 SEQ ID NO:3864  
 SEQUENCE LENGTH:58  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04541  
 50 SEQUENCE DESCRIPTION:  
 GATCCACCCA GGCTTTTCNG TGAAATAAAA GCTCCCAAGT TGGGTACAAA CCAGGAAA 58

55

5 SEQ ID NO:3865  
SEQUENCE LENGTH:57  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS04542  
SEQUENCE DESCRIPTION:  
GATCCAGTC TGAAGGATTA TTGTGAAGAA TAAATGAGAG AATGTGTAAA TGGCAAA 57

10 SEQ ID NO:3866  
SEQUENCE LENGTH:56  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS04543  
SEQUENCE DESCRIPTION:  
GATCTGTGTA TTTGATTTG TACTTTAAAT GTGACAAATA AACCTTTTGG GAGAAA 56

20 SEQ ID NO:3867  
SEQUENCE LENGTH:55  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS04546  
SEQUENCE DESCRIPTION:  
GATCTAATTC TGA AACATT GTAATAAAAT AATNAGCTAT AATGGTATTT TCAAA 55

30 SEQ ID NO:3868  
SEQUENCE LENGTH:55  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS04547  
SEQUENCE DESCRIPTION:  
GATCTCGAGC GTTTATCTCG GGCTTTAATT TGCTAAAGCT NTGCACATAT GTAAA 55

40 SEQ ID NO:3869  
SEQUENCE LENGTH:85  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS04548  
SEQUENCE DESCRIPTION:  
GATCTGCCAT GCACTCCAGC CTAGGCAACA AGAGTGAAGT CTGTCTCAAA ATAAAATAAA 60  
ATAAAATAAT AATAGTAATA ATAAA 85

50 SEQ ID NO:3870  
SEQUENCE LENGTH:52  
SEQUENCE TYPE:nucleic acid

55



TOPOLOGY:linear  
 CLONE:HUMGS04552  
 SEQUENCE DESCRIPTION:  
 5 GATCAAAGGT CATTGTGTA GATGAGTAAT TAAAAAATAT TTAAATCACA AA 52

SEQ ID NO:3871  
 SEQUENCE LENGTH:51  
 10 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04556  
 SEQUENCE DESCRIPTION:  
 15 GATCAAATAG AAACAGGGTT TGCAAGTNTC CATACAGATG CCTCTACCAA A 51

SEQ ID NO:3872  
 SEQUENCE LENGTH:50  
 SEQUENCE TYPE:nucleic acid  
 20 TOPOLOGY:linear  
 CLONE:HUMGS04557  
 SEQUENCE DESCRIPTION:  
 GATCCTATGT AAAATATATA TTTATGTATT AAAAATACTG AAAACATAAA 50

25 SEQ ID NO:3873  
 SEQUENCE LENGTH:443  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 30 CLONE:HUMGS04597  
 SEQUENCE DESCRIPTION:  
 GATCCTATTT TATAAGGAAT CTTTTTTATA CGAATGTACT TATTCITTTA GATATCAGTT 60  
 CTTGAATGTA TACTCCTTAT GATATACAGC AAGAGATTCT TGAGGTTCCC AAGAATTGTC 120  
 35 CTGGAAAGAA AATTGATTTT GAATTGAGAT TAGCAGTGTT TTAATTTGCG TGAGATAACT 180  
 CCTTTAACTC AGCACTTTCA CAAAACCTAA ATATTAAATA AATTGAATTT GAGGCTGGCA 240  
 TTCTTCTCTA AATTGAATTG GACTGGTTGT TTGCTGAGGT ATGAATGGAG CAGCTCGGAA 300  
 GTATTATAAT TCCGTAGCTG AAACAGGACG CTTATTATG TATGNTCCAA TCTCTNCTCA 360  
 40 TTTAAAAATG NCTCAGCATT TCCNGCCATT TAGATAGGTA AATNAATAGT CCATTANNTT 420  
 TGNTNACCTA CCATAANTAT TTN 443

SEQ ID NO:3874  
 SEQUENCE LENGTH:423  
 45 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04598  
 SEQUENCE DESCRIPTION:  
 50 GATCTATGGT ACAGTTCATT GGCAGAGAAT CCAAGTACTG TGGACTTTGT GATTCCATAA 60  
 TAACCATCTA TCGGGAAGAG GGCATTCTAG GATTTTCCGC GGGTCTTGTT CCTCGCCTTC 120  
 TAGGTGACAT CCTTTCTTTG TGGCTGTGTA ACTCACNNCC CTACCTCGTC AATACCTATG 180

55

EP 0 679 716 A1

CACTGGACAG TGGGGTTTCT ACCATGAATG AAATGAAGAG TTATTCTCAA GCTGTCACAG 240  
 GATTTTTTGC GAGTATGTTG ACCTATCCCT TTGTGCTTGT CTCCAATCTT ATGGCTGTCA 300  
 ACAACTGTGG TCTTGCTGGT GGATGCCCTC CTTACTCCCC AATATATACG NCTTGGGATA 360  
 GACTGTTGGT GCATGCTACA AAAAGAGGGG GAATANGNAG CCGAGGGAAA TAGCTTATT 420  
 TTN 423

SEQ ID NO:3875  
 SEQUENCE LENGTH:413  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04599  
 SEQUENCE DESCRIPTION:

GATCCAAATN ACCATCATCT CTGATGGAGA TGGGTTGGGT ACCTGGCCTT CATGGCACCT 60  
 TCACTGCTAG GGATGCTCAA GGGGCAGGCC TGGGGCCTTC CCTCCTGTCT CTTCTCGGTC 120  
 TTTCTCTCT GAGCANCCTC CTACCTCCCC TGCCTGAGCC TCACTCCACA GCCCTCCCAG 180  
 GTACCTAGCA GAGGCTGTCA GTCCTTGGCT CACCTGGAAC AGGGCTGGGG CTGGGTTGGA 240  
 ACAAGGTGTG TGCCNACCA CATCTCTATG ACTCTGTTCT CCCTCCCTGC ATTGTGGCTC 300  
 TTGTATTGA GGGCCTCAAG AGAGTGAGGC CCTACCATCA CTGTCCATAT TAAGTCCAAG 360  
 CCCAAGTGNG GTTCTCTGT TCCCTCNTAA GCAATCAATN GTTNAGTTTC TAN 413

SEQ ID NO:3876  
 SEQUENCE LENGTH:410  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04600  
 SEQUENCE DESCRIPTION:

GATCCACCTG CCTCGGACTC CCACAGTGCT GGGATTACAG GTGTTAGCCA CCACCCCGAC 60  
 ATTATTTGAA ACTTTTATTT TATCATGAGA GAGTTCCAGG AGTCAACTGG AGAGAGATTT 120  
 TTGGTATGAA AATTACATAT GCAAAAAGAC TGATTCCAGT ACATGAAATT AAATCAACA 180  
 TTTACATTAA ATGCCTTCAA ATATGGTAAA ATGGTTTCTT TTGGCACNNT ACCTCATTAT 240  
 GTTTTGAATG ATTTGGTCTA TCATATGAAA TAACTTTTAT AAATATAGTA NCTCAGGCCT 300  
 GGGCACAGCG GCTCAAGTGG GAGGNCCTGCT TAAGCACCCG AGTTTANAGC CAGCGTGGAC 360  
 AACATGGGGG GACCCCTTNC TGTCCCAAAA NTAGCTGAGC ATGGCAGCGN 410

SEQ ID NO:3877  
 SEQUENCE LENGTH:402  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04601  
 SEQUENCE DESCRIPTION:

GATCCCAACA ATGGAACCTT CTTCTCTGC TGCAACAAA GGAATAAAAA ACTTCTGTGT 60  
 GATTTGATAC AGACAATTTA GAAAACTTTT GTTCAAAGT TTCCCATCCA GACTAGCCAA 120  
 GGAGAGCAAG GGAGGGNNNC TAATAAGCCC ATTAAGGTGT CTTCCCAAAC AAATGTTTTT 180  
 TTTGTCCTTC TGCCCAAATG CAGAAACAGC TGCAGCTTTA AAAANTAGCA TACTTTTATC 240  
 TTTTGANGGA AATATGTGAA AGTTTTAGCA CTGGTTGTCT TTGGTTGGCA AGAAATTGTT 300

NAGTGTATN NATTNCTTCC TATTTGNCIG AATTTTNCCA AATTTGTCCA CAGCAAGCAT 360  
GACTACTTN NTCATATNAA ATCTCCANTG NATTTATGCA AA 402

5 SEQ ID NO:3878  
SEQUENCE LENGTH:393  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
10 CLONE:HUMGS04602  
SEQUENCE DESCRIPTION:  
GATCTTGTC CTAATCTA ATTTATATCA AATTTATGAG AGAAAGTATT TTCCTAATNA 60  
TGGTCAAATA AATTTGGTTA ACATCCTAGT GATTCTCTTT CTATATAATA AGGCAATTAC 120  
AGTTTTCAAA GCATTAAGTC TAACATAACT TTAAACATTG TCTTAGGTTT CAAGACACTT 180  
15 CTATTTAATA TTCATTGGGG AAAAGTTGTC CAGCTATCAG CTAGNGAAAA CACATGCAAA 240  
TATGGTTGTG TAAAGTTAAG GGTATANGG NANNANANAT CAGTAGAATT ACATAATACT 300  
AAANGTTGCA GTTGAAGGAA TATCCAGTN TGTGTTGGTA GTTNCTNNAA GNNTTNTAGC 360  
TGTNATTGCC TTGTTTTNT AGCCCTTNGT TTN 393

20 SEQ ID NO:3879  
SEQUENCE LENGTH:392  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
25 CLONE:HUMGS04603  
SEQUENCE DESCRIPTION:  
GATCTNAAAGC TTNCTNCTG GACACCCCAT ACCCANAGTC CTCCAGGCCA CCCTTAAGTA 60  
CAATGTTCTC CTACCTAAGA AGGCATCTGG ATTTTNTCTT TCCTTGGAAG TAGTAAAGAA 120  
30 CTACTCTTTG ACTGTTTTTG ACCTCACAGT GAACCTCAA TACTCTGGA TCCGCAATAA 180  
ATCCAGTATG GTGTTTATAG ATGTAAAAAT GCTATCAGGA TTTACTCCAA CCATGTCATC 240  
CATTGAAGAG CTTGAAAACA AGGGCCAAGT GATGAAGACT GAAGTCAAGA ATGACCATGT 300  
TCTTTTCTAC TTGAAAATG TTTTGGTTCG AGCAGACAGT TTCACTTTT NCTGTTGAGC 360  
35 AGAGCAACCT TGTGTTCAAC ATTCAGCCAG GN 392

SEQ ID NO:3880  
SEQUENCE LENGTH:385  
SEQUENCE TYPE:nucleic acid  
40 TOPOLOGY:linear  
CLONE:HUMGS04604  
SEQUENCE DESCRIPTION:  
GATCTCACCA CTGCACTCTA GCCTGGACGA CAGAGGGAGA CTGTCTCCAA AAAAAACAA 60  
45 AGAAAGAAAG AAAAACTGT AAAAAAAT TTNCTGCAAT GGNCTTAATA TGTGTGTCCC 120  
TTAAAAATGT ATATATTGAA ACTCTAATCC CAATGTGATG TTATTTAGAG GTGGGGCCTG 180  
TAGGAGGTAA CTGGGTCCTA AGGGTAGAGC CCTCATGANT GAGATTAGTG CCCTTATAAG 240  
ANGCCCAAAA GCTAGCTACC TCTNTTCCA CTATGTAAGG NTACAAAGNG AAGTTGGCTG 300  
TCTGCAAACT AGAAGAGGCG TGATACAGTT TGGCTGTGTC CCCACCCAAA TCTTCATCTT 360  
50 AGGTTTTTAA CTNCCGCAAT TCCCN 385

55

SEQ ID NO:3881

SEQUENCE LENGTH:383

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04605

SEQUENCE DESCRIPTION:

GATCTTAAGG TAATTACAAA AGGGAAATTC CAAGAATGCA TAACACAATG ACAACATGGT 60  
 GAGAAAAGTG CAGTACTACT TCCAAGGTAG CTAGTGTAAG GGACACTTGA GTTTTAAAAA 120  
 CTGTGGTTAA ATGTTTATG TGGAAATTGA TGAGTTTGTA TATTAAATAC CACTGCTTGC 180  
 TGCTTTTACT AGAATCAAGT TAAGGGNCAC GTTAGAAATA GAACAGCTTA ATATCACTGG 240  
 CTTCAGAGCA AAATGAGCTC GGGTGACTGC AGATTATGAT GGTAAATATG GCTTTAATTA 300  
 CAAACATGNG GNATGATTCA CTGAAGGTGA AAAGNTAGGG CGGNTGTGNT ATTGAAAAAA 360  
 AACCNCAT TTTTGGCATT GAN 383

SEQ ID NO:3882

SEQUENCE LENGTH:383

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04606

SEQUENCE DESCRIPTION:

GATCTATTC TCAGTAATGA GTGTGTNCTC ATGCCTGTTT CAATATTGGG TTTTGGAGCA 60  
 TTATTGTACC AGGCTGTTGA TTGCATACTG TAGAAGATTT GATGTTTANA CTGGTTCTTC 120  
 TTCATATACT ATGTTTNGTC TCAGTTNCTA TGCTATTGGA TGATACTTCA TTTGTTGTTT 180  
 TGGTGTGAT GAAAAGGGNA ACCTGCTCTC CTCTATTAG ACCTTGACAC TTATTACTGC 240  
 TCAGTTGTTN CTGGAGCTGA AGNAATGAAA NGTCTGGAAG GAACAGCTAT CAGATGTGGC 300  
 CATTGGATT GTNACAAATG AGGAACCTG TGTACTGGGA CAGTTGCCAN AATAATATAT 360  
 GTGGCCTNCT ATAATGTGCA TTN 383

SEQ ID NO:3883

SEQUENCE LENGTH:380

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04607

SEQUENCE DESCRIPTION:

GATCTGAAGC CAGAAGGGCT GAGTGTATTG TNAACTTATT CTTGCATGTN GCTGTCTGGG 60  
 AATGGACCAC ACTACAGCAG GTAGTNTCTG GGGCGATACT GCCGAAAGNC CGANCACATG 120  
 TATTTTGGCT GCAATTGAGG NNCTTGGGAT GCTATTAATT TTGTATTICA GCAACTGCCC 180  
 CTTCTCCTAT CCCAAAGCAC CAATTACTNC CCTCTGCCTC AGNGGTACCA GTATAAGATG 240  
 ACATTCCAAA GACTGGAGGC AACTCAGCCT GAGTTAATTC ACAAATTAT GCCATGCTGG 300  
 GGCTTGAGCT TGAGCTTGGG CTTAGGCTTG GGCTCAGCTT TTGACCCTCA GGCATCTCCT 360  
 TTNCCCTNCT GTCTTNTTN 380

SEQ ID NO:3884

SEQUENCE LENGTH:377

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04608

SEQUENCE DESCRIPTION:

5 GATCTGTTCA CAAGCTGGTG TTCAGGAACC AATGTGTGAC TGGTCCATGC CCACTTCTGA 60  
 TTATATGGAC TCAGAGACAA TGTACATGGG AGTGCTTTGC CAGTGGTAAA GTTCTACAA 120  
 ATGGGAGGTA ATTGCATGGC AGGTGTAAAG TTATTGGAC CATTGAGGCC AGAAAAAATG 180  
 TAGATTTAAA ATATACTGAT ACTGAAAGCA GANCTGTTTG ANCTAATTGC TAATTTTAAG 240  
 10 GNATTGAGAC ATTCATCCAA AGGNTTTAGG CCAAATGTTG CCTAAATTGT TTCTCTATTG 300  
 CATATGAAAG TGATTCNGC GGCTTAACNG TTCTCTNCTN TTTATGTGCA TGGCCATAGC 360  
 TGGTTGTNTT CACATGN 377

SEQ ID NO:3885

15 SEQUENCE LENGTH:367

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04609

20 SEQUENCE DESCRIPTION:

GATCAAGGTG AAGCTCACAG TGTGAGGCTT TCTGGGAGAG CTCACCTCCA GTGAAGTCGC 60  
 CACTGAGGTC CCATTCCGCC TCATGCACCC TCAGCCTGAG GACCCAGCTA AGGAAAGTTA 120  
 TCAGGATGCA AATTTAGTTT TTGAGGAGTT TGCTCGCCAT AATCTGAAAG ATGCAGGAGA 180  
 25 AGCTGAGGAG GGGAAAGAGAG ACAAGAATGA CATTGATGAG TGAAGATGTC GGCTCAGGAT 240  
 GCCGAAAAAT GACCTGTAGT TACCAAGTGA ACGGGCAAAG CCCCACAGTT TAGTCCTTTG 300  
 GAGTTATGCT GCGTATGAAA GGATGAGTCT TCTTCCGAGA AATAAAGCTT GTTTGTTCTC 360  
 CCTGAAA 367

30 SEQ ID NO:3886

SEQUENCE LENGTH:360

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04610

35 SEQUENCE DESCRIPTION:

GATCAAAAGTA GCTTACTATA TCTAACTGT AAAACAATAT AGTTTCTCCT GAACACCTGC 60  
 TTTCTTTCTG GGAGTCTGGA ATTTTGGTAT GTGCCAGGCA GAGACTACCT TTGTGACCAG 120  
 CTCCCAGTAA AAACCCAGG CACTCAGTCT CTAACAAGCT TTTCTGGTTG ACAGTGTTC 180  
 40 ACAAGTGCTG TTACAACTGG TTGCTGGGAG AATTAAGCTC ATCCTCTGTG ATTCCACTGG 240  
 CGGAGGATTC TTGGAAGCTT GCACTTAGTT TCCCCTNGAC TTCACCCCAT GTGTCTTTT 300  
 TCCTTTGCTG ATTTTGTTTT GTATCCTTTC ACTGTAATAA ATCATGGCCG TGAGCAGAAA 360

45 SEQ ID NO:3887

SEQUENCE LENGTH:359

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04611

50 SEQUENCE DESCRIPTION:

GATCGCAAGT GACTGCTTCC GCTTCCAGGA CTGGGCCAGC TAGTGGGGGT GGCAGAGGTC 60

55

EP 0 679 716 A1

TC TT T G C T T C A T T C A G C C C T A G C T C T G T A G A G A A T G C A A A C C T C G A C T C T C A A G G A T G T 120  
G A G G A A C A C A A G T T C A T T T C T G T T G T T G C G G A G A C A C T G C A G A C T C C A C T G T G C C G A G G T 180  
T G A A C T C T T N N T T G T T G C T C A A G T T C T A G G A G T C C C T T T C C T G A A T A T A T A C T T G T T T G T 240  
C A T A G T T T C C T T N N C A A A G T A G T A A A C T T T T C T A T T N N T C T A C T T G C C C A G T A G A G A C T C 300  
T T G A T T C T G G A A N A T T C T N G N C A A A A T A A T T T A A T A A T C A C A T G G T T G C T T C T T A A A 359

SEQ ID NO:3888

SEQUENCE LENGTH:359

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04612

SEQUENCE DESCRIPTION:

G A T C A C T T G A G G C C A G G A G T T C A A G A C C A G C C T G G G C A A C A T A G T G A G A A T G C A T C T C T A 60  
C A A A A A A T A A A A A A T T A G C T A G G C A T A G T A C C T G A G G C C A G G A G G T C C A G G C C G C A A T 120  
G A G A T G T G T T T G T G C C A T T G C A C A C C A G T C T G G G T G A C A G A G A A A G A C C C T G T C T C A N G G 180  
G C A N N T T A A A T A A A T A T C T T C A T A T A T A A A T T A A G C T A A T T A A A A N T A T T T T C C C T G T 240  
A T T N T T T T A N T A T T T T C T A A T C T G A A C C C A T A T N C A G C T G A C T A N T T C A T T C T T A G A A N T 300  
G T G T T A T C T G T A A T C T N T C C T A A C A G T G T A G C C C A C A A G G N T C C A T G G C A C T T T T T A N 359

SEQ ID NO:3889

SEQUENCE LENGTH:359

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04613

SEQUENCE DESCRIPTION:

G A T C T A A A G G G G A C A C T G T A C T C A A G C T T T T N A C C T C A T G C C T T G T G T A G T A A A A A G G A 60  
T T T G G G G G T T T G T T T G G T T C C T G A G A G G G T T G T G T T T T G T T T T G T T T C T T T T G T T T A 120  
T G T T T T G C C T T T C C T C T T T G T C T T C C A T G T A G A C C A G A T A T T T G A A A G G G C A G A C G A T 180  
G G C T A G A G G T G T A A T G T G C A G C T T G T T A T A C G G T A T T T T G G G A A A C T T A C C T T G G A T G G 240  
G A A A T C G A A T C G T G G A T T C A C C A G G C C G G T G C T G G C A C A C T C A C C C T C G C C C T T C C C T C 300  
C G G T T C A G T A C C T A T T G T T T C T C C T T T C A A A T A T G T G A T T G T A C T A G C T C T T C C A T A N 359

SEQ ID NO:3890

SEQUENCE LENGTH:358

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04614

SEQUENCE DESCRIPTION:

G A T C T G A T G G G C T C T A A C A G T G C T T A C T T G C A G C C T T G T G T C C A C C A C C A A C T T C T C A T C 60  
A T G T T T C T C T C C G T T G G C C G T T G G G T T T C C A A C T C T T C A A N C T T C A G G G T C T G G G N C A G G 120  
G A G T G G G C C C A C C A T T T G T G G G A A A G T A T C A T T C C T C C A C C T C A G G C T T G G G T A G A T T T 180  
G G A A A A A N A C A A G G T N A G G A T A C G C C T G T T T G A G C T T T G G G G A T G A A C T T T G C T T T T T A 240  
T A T T T A N C T A N G G N T A C T T T T A T A T G A T G G G T G C T T T G A G T G T N A T T N A G C A G G N T C T C T 300  
T N G T T T C C C G A G G G N C C T G C T T T T G N A A G G T G A C C N N G G T T A C T T A A G C T A A G G N T T N 358

SEQ ID NO:3891

SEQUENCE LENGTH:356

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04615

SEQUENCE DESCRIPTION:

GATCAACCCA CATTAGAGTG TCTAAGGACT CCTGAGAATT CCTGTTACAG TAAACAAAAC 60  
TAACGTAATC TACCATTTC TACACTATTT GAGCATGGAA ATCATAGTCC CCACTCTGTG 120  
AAACCTTAAC GCITTTTGGG AGACATTTC GTAGCATGTC AGTTTGGAGA AATGNNTGNG 180  
CTACGCCCTTG ATGAAAGAAC CGTGTGGTG CTGCTAAGTT TAGCCATTAT GGTTTTNCCT 240  
NTCTCTCTCT TAAGCCTTAT TCTTCAACTA AAAGATGAGG ATTAAGAGCA AGANGTTGGG 300  
GGNNGATGTG AAAATAATTN TATGNGGTTG TCTAAAATAA AGAGTAGTTT CTTAAA 356

SEQ ID NO:3892

SEQUENCE LENGTH:355

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04616

SEQUENCE DESCRIPTION:

GATCTACAAA TGTACGTTGT TACAGGGCTG CTCCTAAAG ATTTTTTTTA CCTCAGGTTT 60  
CTCTTAATAT AGTTCTCCAG TCACTGACCT TGAATTGACT TACATAAATT ACTGCCAATG 120  
TTTAAATTGC CCTTATGTTT ATATTTATTA TGTCAAGCCA ATTCGTACAT ACAATTTGGA 180  
ATCAAAATGTC ATAAGAATTT ATTATATAAA TTTNTCAAGA ATAAAAATGC CTCTCCAGCC 240  
TTAAGTATTT ACATGCTCCC AGGTCATTGT CAGTTTATGG TATTATGTTG TTTTATTTAA 300  
AGCATTGAAT TGATAGAAAA AATTGCTCTG TAATAAAAAT CTACTTTCAC ATAAA 355

SEQ ID NO:3893

SEQUENCE LENGTH:351

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04617

SEQUENCE DESCRIPTION:

GATCTCATTC TTNTTATGGC TGCATAGTAT TCCATGGTGT CTATGTACCA CATTNCTTN 60  
ATCCGGTCCA CCACTGGTGG CATTTAGGTT GATTCATGTC TTTGCTATTG TGAATGGTGC 120  
TGCGATAAAC ATGCATCCAT GTGTCTTTAC AGCAGAACGA TTTATATTCC TTTGGGTATT 180  
TTTTTTGAGT ATAGTAATAG GNNNNNNGGG TGGAGTGGCA GTTCTGTTTT AAGTTCTCTG 240  
GGAAATCACC AAAGTCTTT CCACAGCAGA TGAAGTAGTT TACACTCCCA CCAGCAGTGT 300  
ATAAGTGTTC CCTTTCTCT GCAACCTCAC CAGCATCTGT TATTTTATA N 351

SEQ ID NO:3894

SEQUENCE LENGTH:350

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04618

SEQUENCE DESCRIPTION:

EP 0 679 716 A1

GATCTTCTTG TAAGCACATC CAGAGTGAGA CTTTCTATG TTTGAAAGAA GAATGTGTGT 60  
 ACATTTCAAG AATTTGGGTT TTTTGGAGGG AGGAGGAACT GTTTACGTTT TTCCTCCACA 120  
 CGTTTGATTT TTGACACATA CACCCCTAAT TCCTCAACAG CAGACCTCCT GCAGCCACCA 180  
 GGGGCCAGCT CTGTGTAGGA ACCAGATGGT CTTTTTCCAA GCNGCATCTT CAGCTGCCAG 240  
 CTAAACTCCA ACCCCAGNCA GGGAGGGGCA GGCTCAAGTC TTNCAGAATC ACACAGGGGC 300  
 AACACATGCA NNNNCCGGNA CCTGTNCTGT ACNGTCTNGG TTTNTTCNTN 350

SEQ ID NO:3895  
 SEQUENCE LENGTH:348  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04619

SEQUENCE DESCRIPTION:  
 GATCCATAGG AGGGTAAAAT GTCCGTTTTTTC TTCATTAAAA CTTCTCAGCT CAAATTTATA 60  
 CTAAAGCATA TCCAGGAATT AAAAAAAAAAG GTTTTGATGA TATTGCTTT CTAGTTTAAT 120  
 AAGTTTAAAT ACTGAATAGG TTAATTAAT ACAAATAAC ATAAATGCT AATATTTATT 180  
 GAGTATTTAC TTGTGTACCC ACTACGNTTT TAAGTAATTT ACTGGGATTA TTTTATTTTA 240  
 GTTTAAACAAT GCAGGTAGCT ACTATAATCG TCCNGGTTTT ACACCTTGAGG AACAGGGCTA 300  
 AGAGAGATTA ANTTAGTGGC CCAAGGTCAG AAAGCTCGTA ATTCTTGN 348

SEQ ID NO:3896  
 SEQUENCE LENGTH:347  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04620

SEQUENCE DESCRIPTION:  
 GATCCCAAAT ACTGCCATTG TGTGTCTAC TTATGAGTTA ATTGTGTACC TGTTAGAAGA 60  
 CCGTACTCAG TAACAGGCCG GAAAATTGTG CTCTAGAAGA ATAAACTGA AAAACTCTAG 120  
 AGAATTTTTT TTCCCCATTG ATGTTTAGAA AGTTTGAGAC TGAACAGGA AAGGCCATAA 180  
 AATATCTGGT TCATATCACC TGTGGACAT TTCCTTTTGG ATTCATGCTT TCTGGAAGGT 240  
 TTAAATTCAT TAACGTAAAT AGTTAATTAT AACTNTTNT TTAACCTAAG AGGATTCAGG 300  
 GTTAAGCACC AACTAAATTA AATCATGCTA TTTAATTAN GTATAAA 347

SEQ ID NO:3897  
 SEQUENCE LENGTH:345  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04621

SEQUENCE DESCRIPTION:  
 GATCTAGAAT CTNTNCTNGG NTAAGCATAT AGGATGCCAC TTCTTGCTAC CTCCACAGCA 60  
 ATACATCACC TGGACAGCTT GCCACTCTTT GTTGCCCTGA ACTTCTCTGA TGTTTAGGCA 120  
 GCCCATTCTG TGAAGTGAAC CACAGTGAAT GAGCTACATC CTCCTGCTTT CTTCTTCTAT 180  
 TATNACTTTT ACCTGATTTC TTCTCAGGAG GAAGCTGTAC ATTTTAACAG GACAGATAGG 240  
 AGGAAAAGCA ACTATTTTTC TGCCGAGATA ACAATTGACA ACTTGGGGCA GTATGTGCAG 300  
 AGTTTTCTCG GAGTTGTATT AAAAATTATC TGATAAGCTG CCAAA 345



EP 0 679 716 A1

SEQ ID NO:3898

SEQUENCE LENGTH:342

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04623

SEQUENCE DESCRIPTION:

GATCAGTGTA CTGTTACCCG GACATACCTA TTCCTTCACA AGTTCTGGTT CTTCAAGTGCT 60  
GCTTACTATT TTGGTAACTG GGCCTTTCTT GGGGTATTTT TGATTGGATT AATTGTATCC 120  
TGTTGTAAAG GGAAGAAATC GGTTATTGAA GGAGTAGATG AAGATTCAGA CATAAGTGAT 180  
GATGAGCCCT CTGCTTATTC TGCTTGACAG CCTTCTGTCT TAAAGGTTT ATAATGCTGA 240  
CTGAATATCT GTNATGCATT TTAAAGTAT TAAACTAACA TTAGGATTG CTAACNAGCT 300  
TTCATCAAAA ATGGGAGCAT GGCTATAAGG CCAGCGATAT TN 342

SEQ ID NO:3899

SEQUENCE LENGTH:410

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04624

SEQUENCE DESCRIPTION:

GATCTGGTGC CCTCTTCTC CTGGATTCAC ATCCCCACCC AGGGCCCGCT TTTACTAAGT 60  
GTTCTGCCCT AGATTGGTTC AAGGAGGTCA TCCAACGAC TTTATCAAGT GGAATTGGGA 120  
TATATTGAT ATACTTCTGC CTAACAACAT GGAAAAGGT TTTNTTTTCC CTGCAAGCTA 180  
CATCCTACTG CTTTGAACCT CCAAGTATGT CTAGTCACCT TTTAAATGT AAACATTTTC 240  
AGAAAAATGA GGATTGCCTT CCTTGTATGC GCTTTTACC TTGACTACCT GAATTGCAAG 300  
GGNTTTNAT ATATTCAATA TGTTACAAAG TCAGCANCCT CTCCTGATTG GTTCAATNAT 360  
TGAATGTGCT GGNAAATTNA AGGTCGGTNN NANTTTAAAN CAAGGNTNCN 410

SEQ ID NO:3900

SEQUENCE LENGTH:338

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04625

SEQUENCE DESCRIPTION:

GATCAAGATA TAGAGCATCT CCATTATATA AGTTCCTTCA TGCTCCTTCC CAGCCAGCAA 60  
TTCTNCTTAC TGTCTGCTG ACTCTGTTT TCACCTTCAT CACCATCAGC TCATTNGCT 120  
TGTNCTTGAC TCATAAACAG AATCATATAG TAGGTGGTTC GTTCAATGTA GGCAGTCTGT 180  
TTTNGCTTTA ATCATTACAT GAGTATACAT CCATATNGTG TGAAGCAGTA GTTCTTTNGC 240  
ATTGCTGTGT AATATTCCAT TGTATAATTG TATAAATATA TGTGGTATAA ATGTAAGTAT 300  
AGCACANTTG ATTCCTTATN GGGCCACTTG GTTTATTN 338

SEQ ID NO:3901

SEQUENCE LENGTH:238

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04626

## SEQUENCE DESCRIPTION:

5 GATCCACTGG TAAAGGGCAT CCCAGAGGNC AAAAAATCCCT TCAAGGAGCT CAAAGGAGGC 60  
 TGTGTGATTT CATAATACAA AAAAAAGAA AAAAAATTAN ACAAATTCCT GGAAATATCT 120  
 CAAATGTAA TAACAATATG ANTTTTCTC ATGCATACTA TTACTACTAA GCATGTACGT 180  
 GANTTTTTAA ATGTATAGAT GTAAACTTTT ANTAAANNTT GGGGTGTGGT AACCCAAA 238

10 SEQ ID NO:3902

SEQUENCE LENGTH:331

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04627

15 SEQUENCE DESCRIPTION:

20 GATCTCTATA AGTTATTAAT TTAACCTGAA ACCAAAGTGG TCTCCATTTA AAGTTACTTA 60  
 ATCCCTTTGT ACCACCTATT TCTAGTTAAA TATATGTNGC TANNCAAATA GGTAAGTGC 120  
 TTCCTTGCCA TGATGGTAAT GGATTGGAAC TATGAAGGCT CTCAGTGTAT TGGCTTCTGT 180  
 AAAGATGAGG CGTCTCCTCA GAANCCCNAA CTTTTCACAT TTCTGCTTAC TAGACCTGGG 240  
 TTGATGTACA TGGTAAGTCT CAAACAGATG CAAGCTATGT GCAAAAANGGA ACTTTAGCCA 300  
 AATGGAAATA GCTGGATGCT TTGNGAATTG N 331

25 SEQ ID NO:3903

SEQUENCE LENGTH:67

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04628

30 SEQUENCE DESCRIPTION:

GATCCAACT GTGTTGTTCT TAAATCAAAA ATTGGNTAAT TTTTAATATN TATGTATTAA 60  
 TCACAAA 67

35 SEQ ID NO:3904

SEQUENCE LENGTH:327

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04629

40 SEQUENCE DESCRIPTION:

45 GATCTGCCGG AGTCTTGAAA TTCAGCTGAT TGGAAGTGGT TTCTTTGACT TTCAAGGTCA 60  
 TTCCCTATCA GTTACTACTA AGAGTTCTCT TACTGTCAGA ATCTCTCTTG CAGTACAGCT 120  
 CAAAATAGTG GATGCATTC AACTTGACC ACCTTTCCT ACCAGCTAGT TAGAAGTCAT 180  
 CAATATTTCT CTACATTTNG TTTATCTGTA AGTCCTTTAA ATCTATTTTN GCTAGGCATT 240  
 CATTATGATT AATAGTAGAC TTTAAGACA ACATTNTGT CACTCCCCAC CTCCTCATAT 300  
 TTNATAAAGG AGATATTTAC CTTGAAA 327

50 SEQ ID NO:3905

SEQUENCE LENGTH:326

SEQUENCE TYPE:nucleic acid

55

TOPOLOGY:linear

CLONE:HUMGS04630

SEQUENCE DESCRIPTION:

5 GATCAAAGAC CAAAACATTT TCTTAAATAT ATTTTATGTA ATATTTTATT TGTATACAGT 60  
 GTTGTGTGATG AAATATTTAA CTAGAGCATG ATATTTTAAA TGTAAAGGTG TAACATATGT 120  
 TAAATAAAAC TGTATTTTN GAATTTNAAA ATTNNGTTTT NGGGGGTATG ANCTACTAGA 180  
 GTTTAAATTT CTGCCAACT ATTACTTATA TGTNCTATTG TGTAACATAC TTNCTNGAAA 240  
 10 TATTNNGGTT TATAGAATTG ANGGTTCTTA TCAGATGGGA TACTGGGGAC TATAACAAT 300  
 GGAAATAAAG CCACTGTATT TNTAAA 326

SEQ ID NO:3906

SEQUENCE LENGTH:325

15 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04631

SEQUENCE DESCRIPTION:

20 GATCTAATTA AGCTAAATTT TGGTGCACAG CAGGTTGTAC ATGATTTCAT GTTTATGTAG 60  
 CAAAATGCAT TGAAATGTAT TAGTGTTGAA ACATACATGT AAAGGTAGTT GTGGAAATTG 120  
 TTATATTTNC CTTGTGTGTC ATTTATTAG AGCATAAAGG TTTTTTTTAT TCAGCCNNNC 180  
 TGAATAAGGC TAAATGAATA CTGTAATTGA AAATATATTT NAAATCTTTG TCATGAGTTT 240  
 25 TTTTAAAAAA ANCTATTGCA AATTGTATCA TTCCTGATTA CACAGAACTT TGTGGGTGGT 300  
 TTTAANTAAN TNTNNTACTT CTAAG 325

SEQ ID NO:3907

SEQUENCE LENGTH:324

30 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04632

SEQUENCE DESCRIPTION:

35 GATCTGGCCC GAGCTCTCCT CAGACCTCCC CAGACCTGTC TTCTCATCAG CCACCGCTGT 60  
 TTTCTTTTGC CGAACGATGG TTGCATCTCT CGGACACAGT GTACCCCTC CCAAGCCCTC 120  
 CCTGAGCCGT TCTCCTGAGT CCCTGAGGGC AGACACAGCT CCAGGGACCC AGGCCGCTG 180  
 CCACACCCNC GACACTNCTG NTGTCCACTG GCCTTAGCTC CTGCAAGTTC CCCAGTGTCC 240  
 GCACCTGTTT CNTTCCCTGA CCTTACCTTN CTGGGGTCTG TGACTGACTG GAGATAAAAN 300  
 40 TAAAAGCAAT TGTGACANCT GAAA 324

SEQ ID NO:3908

SEQUENCE LENGTH:319

45 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04633

SEQUENCE DESCRIPTION:

50 GATCAAATAC CGAAATTGAA CTTTCTAAAA CCTACACATA GCATGCGTTT AAATTCTATT 60  
 ATATAAGCC CCAAGTGCTT TACCTTCTAA AACATGCTTC TCTATAGGTG CAAAGTTATA 120  
 AGATATGTAG AAGAAAAACAT CCATCAGAAT CTNCTGGAGA NTATGGTCAG AGTCTTAAAC 180

55

AGGCCAGTG CTGAGTNCCT TGTCCACTTA GTCACACATC TTTTGTGGGA ATGGGAAAGG 240  
AAGGAGACAG CCAAACCTCTG ACAANGGCTT TTCCTTATAG ATTAACCCAA AGCCTAGGTG 300  
AGGGTTGATA TATTAATGN 319

5

SEQ ID NO:3909  
SEQUENCE LENGTH:317  
SEQUENCE TYPE:nucleic acid

10

TOPOLOGY:linear

CLONE:HUMGS04634

SEQUENCE DESCRIPTION:

15

GATCTGAGCA AAATGTGAAC TCAGTATGTT TACTATTGCT CTTACTTGAA AACTTTTTTT 60  
CAAAAAAAGC ACAAATTAAA GTAGTAAATT CATATCCATA GATAGTTCAT TCATTCAACA 120  
AATATTTACC AAGTTCCTAA TATAAGTGAA GGNCCACTTC TCAGATTACT AAGTCATTG 180  
TATGAATATG TGTGGCAGTG AAGAGAACAG GTCCTTCAA AAGCATTGGA TTATCTTTAT 240  
TTNTTTTAAA TACACTCTCT NATNTTNCTA CTTGTTTTTT TGTTAATCAT AGCAGGATAT 300  
GACAACTCTT ATTTGAN 317

20

SEQ ID NO:3910  
SEQUENCE LENGTH:317  
SEQUENCE TYPE:nucleic acid

25

TOPOLOGY:linear

CLONE:HUMGS04635

SEQUENCE DESCRIPTION:

30

GATCTACTCA GATGTCATNA TACTCCATAC CTGCTTTTCC CATGGCCGCC CTACGGAAAA 60  
TCCCATCCAC AGAGGCCAGG GCTACCCAAG NCCCTCCAGG TGAGCTGGGC CTTTCCTTTA 120  
TGAACCTCCA TCCTCCACAG CAGCTACAGT AGGGCCTCCT CACCCCGTAC CCCACAGCTA 180  
GACAGTGTCA GCACTCATCT CTCCTCCCA CATTNTGGA GCTTTTTTTT TCCTCCNCA 240  
TTGACCTTTG TGGTCTTCTG TGATTATTTA TGCTGCCTCC NAAGGATAGA ATTGAAATAA 300  
AATGTTTTCA ACTTAAA 317

35

SEQ ID NO:3911  
SEQUENCE LENGTH:316  
SEQUENCE TYPE:nucleic acid

40

TOPOLOGY:linear

CLONE:HUMGS04636

SEQUENCE DESCRIPTION:

45

GATCAAAGGT TCTTCATTCA AAAAGAAGCA ATATCCTTTT GCCTGATATG GGGTGGGAAG 60  
GGTAGGTGGC GATGATATTT CAAATGAATT AGAAACCACC TCCCATTGGA TGATAGCTGG 120  
AGAAATGGAC TGACCTAGAA GTTACAGGAC CAGAACTAC AGTCACCACT AACCTTTCTA 180  
CGTGGCACCC AGCCCCACTT GGAGACATTA TTTTCCATC AAACACAACC GTACTGCACA 240  
GACATCTTCA CTGTCTGTTG CAAAGATTGG AATACGTAGA TTTCTGTTCA AAATTAAATA 300  
ATATTTTAAA TACAAA 316

50

SEQ ID NO:3912  
SEQUENCE LENGTH:316

55

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04637

5

SEQUENCE DESCRIPTION:

10

GATCCACTGG TAAAGGGCAT CCCAGAGGAC AAAAAATCCCT TCAAGGAGCT CAAAGGAGGC 60  
TGTGTGATTT CATAATACAA AAAAAAGAA AAAAAATTAA ACAAATCTT GGAAATATCT 120  
CAAATGTTAA TAACANTATG ATTTTTNTC ATGCATACTA TTACTACTAA GCATGTACGT 180  
GANTTTTTAA ATGTATAGNT GTAAACTTTT AATAAANTN GGGGTGTGGT AACCNGNGG 240  
GNCTATGTTT TNNTAACAT AGCTGGCACA GGGTTTAAACA CATAATNGCC ATAANTATTG 300  
CTTAAGGTNC TTTAAA 316

SEQ ID NO:3913

15

SEQUENCE LENGTH:313

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04638

20

SEQUENCE DESCRIPTION:

25

GATCCACCTG CCTGGCCTC CCAAAGTGCT GGGATTACAG GTGTGAGCCA CTGTGCCCGG 60  
CCAAACCATT TTTGTTAAT TTCATTTCTA CATGGTCGTC AAACGTGCCT ATCCAATGAA 120  
GCCTTCATAG AAGGCCAAG AAGACAGAGT TTGGGGAGCT TCTGGATAGC GGANATGTGG 180  
AGGTTCCAGG AGGCGAGGGT GCCCAGGAAG GGCATGGAAG CTCCTGTGCC CTCCCCATA 240  
CCTTGCCCTA TGCATTTCTT CATCTGTATC TATTGTGATA TCCTTNACAA TAAACTGGT 300  
AAACATANAT AAA 313

SEQ ID NO:3914

30

SEQUENCE LENGTH:312

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04639

35

SEQUENCE DESCRIPTION:

40

GATCACCAGC TCACGTATG TTGCCTTCTC TTTCTTTGT GTGTGTGTTT ATTAAAGTNA 60  
TTTTTCTTCC TCCTCTCCCT TTTCTTTTG GCCCTCCCTC CCTCCCTCTN CTGCCATGTA 120  
ACTGGAGGAT GTGCTATGAG TTGCAAACA GCTGGACTGT CAGGCTGCTT TTTTCCAGA 180  
TGTTCCCTCT CTGCCTCCCC TTCCCTCCT CTCCCTCCT TTTCTTCTT TCCTTCCTTT 240  
CCTTGGAGCA CTGAGCACCA TTTGGAAGCT TGAGAGAAAC CAAAATTAAG GAGAGAAAGA 300  
GAGAGCGTGA AA 312

SEQ ID NO:3915

45

SEQUENCE LENGTH:311

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04640

SEQUENCE DESCRIPTION:

50

GATCTAGAGG AAGTACAGCC ACCCACTGAC ATCTGANTTT ATATACCTNT TGAGTTTGA 60  
GTGCACCCAA AACTCGATA AACCAGGTGA AGAAATTTAG CTTCCATGTT CTACTTCAGC 120

55

EP 0 679 716 A1

TAAACAGCT ACATACAACC TAGTACCCTT GANGTCAGAC AGACATTTC A GTTGCTTACC 180  
TCCAGTACTG AGCCTTGCTT TGGGAAACTA AAAGATTAG ACCAAGTCAC TGCCAGTTT 240  
NGCCTTNGTN GCATTNGTA CAGTTTTTAT ATNTNGGATA TCTTGTAAT AAAGACAGCC 300  
AGCTTTTCAA A 311

SEQ ID NO:3916

SEQUENCE LENGTH:308

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04641

SEQUENCE DESCRIPTION:

GATCAAACT AAAATAAGTA TAATGCATTG TAATCCAGA GATAAATCCT AGACCCTTCT 60  
TGGCCTCCT CTNACATAAT TCTAATCCTA CAGTCTCAGA GATGCTGTTG TATCCTGCCC 120  
CCCAACCCCA TGATAGTNAT AGTGGTTTTT GCCTTGAAGG AATTGCTTTG TATTAGCTT 180  
TTCCCTCTCT AGATTTCTAG TTCCTTTTCA GTATTGGATT GGATTTGAGA TTTGATTAA 240  
CTAGTACTCA GGTTCAGATG CTCGCCTCTT TGCAATTTTA ACATCTATTG GACAATAAAG 300  
TCAGTNGN 308

SEQ ID NO:3917

SEQUENCE LENGTH:306

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04642

SEQUENCE DESCRIPTION:

GATCTAATGC ATCTATATC CAGTAAGTAG AATTATCTCT TCATCTGGGA CCTGGAAATC 60  
CTGAAATAAA AAAGGATAAT GCAATAAACA CAGTTGCAGG AAAGTATGTT AGCTATATAC 120  
TATGAAGTAC TCTTAGTTA CTTATGTTGA ATGGCTTAGC TATTAATACT CAAATTGAGT 180  
TAAAAAGAAA ATTCCTCCTT AAAAAATCAA ACGTAATATG TATTACATT CATGGTACAT 240  
TAGTAGTTCT TTGTATATTG AATAAATACT AAATCACCTA GGTGTCTATG TTCTATCACA 300  
TCTAAA 306

SEQ ID NO:3918

SEQUENCE LENGTH:306

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04643

SEQUENCE DESCRIPTION:

GATCAGCTGC AGCAGGNTGG GTCCCTCTGC ATCTGTCCAT CACTGCGACT GATGGCAATG 60  
ACTGAGTATA ACACCTTTCT TCATGGTCAA CTCTACCCAG GAACCACGTA GGAAGGAAA 120  
TTCTGGAAA CAGCTCCCAG CCTTAGCCAA CTTGACATAT CATAATCCAA CAGANCTCAA 180  
CCTCTACCAA CTTGGAAATC ATGTACATT GTCAGGACTG TATTTAATT CCACATAGAG 240  
AGAAAGCAA ATTATCTTT TGACCAAACT AATAGANTTA TCCATTAAAC ANACAAAAC 300  
GTGAAA 306

SEQ ID NO:3919

SEQUENCE LENGTH:306

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04644

SEQUENCE DESCRIPTION:

GATCCTCCCA GCTCTGTCTC CCAAAGTTCT GGGATTACAG GCATGAGCTA CTNTGCACAA 60  
 GCTAAGAATA TGTGCTTTTA AATCCCATAA GGAAAAAAT ATTTTGGTA AATAAAATTA 120  
 AAGCATAAAT ATCATGATT ACCTGACGTT TACCGTAAGC AACATAAAG ATATGTGATA 180  
 CTGAATGACT AAAANGTAGT TTTGGTAAA GAGAGTTCTA GTTCCATGA GGNCTCTGAC 240  
 AATGCTGCAT TTTATTTTNC TTTTAAATGT GCACATTGGT ACANGTTTAA CTA CTCTACT 300  
 CCTGTN 306

SEQ ID NO:3920

SEQUENCE LENGTH:304

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04645

SEQUENCE DESCRIPTION:

GATCCTGTTA TGAAAAGCCC TAAAAATAG GGTATAGAGT TTGGGCATAT TTCAGAGGTA 60  
 ATAAGAAAGC ATTCTGCATT TTAAAGTAA GGTAAAAA TGTTCCTAAT TAGNGATACA 120  
 GCAAAGTTGG TGTGAGAGGA TAAAGCTGAT ATACATAATC TGAGGAGTTC ATGAAAAATC 180  
 ATGTAAANCT GTAGTATGAA TTGGCCTAGG NGCAGCAGCT NAGGGCATAG NGA CTTTAAG 240  
 ACTTTTCCAA GAGAGTGNAG GCTGGNGATA AATTGTGACT AAAATATATT TTGTGTTTGN 300  
 GAAA 304

SEQ ID NO:3921

SEQUENCE LENGTH:301

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04646

SEQUENCE DESCRIPTION:

GATCAAGTAA TTCTTCACT AGGTTGGGTT TGGGGAGGGG GGAAAAGAGG GGCTTTTCCT 60  
 AGGAGAACGA TAAGAAATGG AAAGACTCCT TGAAGTGTG CAAGGGAACC TCCTAGCACT 120  
 GTGAAAGTCA GAATCGCCTC AGCATTTCCA TGACGCACAT TATGCAAATC TTTTAGCAC 180  
 TATTTTAAGT TTGAAACTT TAACAATGAA GGGGAAGGGG AAGNTTTCCA CCAACTGANT 240  
 CATTTGTGCA CGTGTATAGC TCAAAGNGCT TAGACTTCAA ATATATCTGG TGAATGACAA 300  
 A 301

SEQ ID NO:3922

SEQUENCE LENGTH:301

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04647

SEQUENCE DESCRIPTION:

GATCTGCCTG CCTCAGCCTC CCAAAGTGCT GAGATTAGAG ACGTAAGCCA CCATGCGTGG 60

EP 0 679 716 A1

5 CCAATAAGAC TGACTTTTAA TTTTCCTTTC TTGACTGTT CTTGTCTTGT TTTGGTATCA 120  
 AGGTTATATT AGCCTCATAA AAGGAGTTAA GAAGTGNTCG CTCCTTCTAT TTTCTGAAGG 180  
 AGTCTGCTAA GTATGAGAAC TCTCTATTTT ATGAATGATT GATAAACTC TCTTGGAAC 240  
 TGTCTAGACC TTATGGAAAT ATTCAGTAA TAGTTACAAA GCTATTCAAG TTGCTGGTT 300  
 N 301

10 SEQ ID NO:3923  
 SEQUENCE LENGTH:299  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04648  
 SEQUENCE DESCRIPTION:  
 15 GATCTCAGTT GGATAGTTGT ACCTCAAAAA AGTAGGTGAG AACTGGCTTC CTCATTGTCC 60  
 CAGGATGTCA AATACTAATG ACATAAGAGC TCACTTACGT GCCAAAATTC ACTTTTATAC 120  
 TAGTTTTTCA GTGCTTTAAT ATTTGTAAC NAAATTTNAA AACTCGTATT TACAAACACT 180  
 ACTGTAACN CAGTGAACCT GAATTGTGCG ATTGANGCTT TTTGCTTATC ATAGTATNTA 240  
 20 TTACACTACT TANTTCAGTA AATATATAAA NGTAGCCTNC AATTGANGTG TNTATTGAN 299

25 SEQ ID NO:3924  
 SEQUENCE LENGTH:293  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04649  
 SEQUENCE DESCRIPTION:  
 30 GATCAGAAAG GTGAAATGTT TCGAATTTAA AATGTTTAAA GCATGTTTGG TTTTATTATT 60  
 TTTACATAAT TGTTTACCAC TAGTTTTTCC ACTAGCTTTT TATTATATAT GTTTAATTAT 120  
 GTAATTGITA TTTACTAGCT TTTATTATAT AATTCCTTTT AAATAATACT ACTATTCATC 180  
 AACTCTTGTC GCATAAGAAT TGCAGTTTTT TCTACCAAAC TTTTACTTCA TCTATGAGTC 240  
 GTGTTAGAAA TAGTCATTGA AAAAATATAC AGTAAATAT CTAGCAAAAT AAA 293

35 SEQ ID NO:3925  
 SEQUENCE LENGTH:293  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 40 CLONE:HUMGS04650  
 SEQUENCE DESCRIPTION:  
 GATCTGGTGA AGGCCTNCTG GCAGCATCTT CTCAGTAAGA CCTCATGTGG CAGAAGGAAA 60  
 GGGAGCTATC TGGAATCTCC CTTATAAGGG CCCNNNNGCC ATTCATAAGG GCTGCACCCT 120  
 45 CATGACCTAA TCACCTTCCA AAGGCGTCAC CTCCTGGTAC TGTCACCTTG GCGGTTACGA 180  
 TTTTCATATA TGAATTTTGG GACGGCATAT TCAGTCCACA CCAGGAAGTT CTTGCACNTC 240  
 ATAGTCGAAA GTCAGTTTTG TGGCTATAAA AATCTTGTTT CCATTTTCCG CTN 293

50 SEQ ID NO:3926  
 SEQUENCE LENGTH:292  
 SEQUENCE TYPE:nucleic acid

55



TOPOLOGY:linear

CLONE:HUMGS04651

SEQUENCE DESCRIPTION:

5 GATCCACCCG TCGTCGCCTC CCAAAGTGCT GGAATTACAG GCGTGACATG CATGCCCGGC 60  
 CAACATATAA TTATTATACA ACCCAGCCAC TGCACTCTTG GGCATTTATT CTAGAGAAAC 120  
 AAAAATTAT CCCCACTCAA AAGCATGTAC GTGAATGTTT TTAGCAGTTT ATTTTATAAT 180  
 GGTCAATATC TGGAAACAAT CCAAATGTCC TTCCATGAGT TAATGGTTAA AATAACTGTG 240  
 10 GTGCACCCAT ACCATGGAAT ACTGTTGAGC AATAAATGG TATGAAATGA AA 292

SEQ ID NO:3927

SEQUENCE LENGTH:291

SEQUENCE TYPE:nucleic acid

15 TOPOLOGY:linear

CLONE:HUMGS04652

SEQUENCE DESCRIPTION:

20 GATCCTATCT AAAAATATGT AGTTATTAAG CATTCTGTGG ATATTTGTNA ATAAGGTAGT 60  
 TACTATGGTC CGAATATCTG GGCCTGCCCC CCCAAATNAT GCTGAAACCT AATCACCAGT 120  
 GTGATGGTAA TAGGAGGTGG GACTGAGCTC TGATGAATGA GATTAGTGCC CTTATAAATT 180  
 ATGACCAAAA GAGCTCTTCA CTCCTCCTAC CATTTGAGGA TACAGTGAGA AGCCTTCATC 240  
 TATGAACCAC AAAGTAGCCC TCATCAGACA CTGAATCAGC CAGTGCCTTG N 291

25 SEQ ID NO:3928

SEQUENCE LENGTH:290

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

30 CLONE:HUMGS04653

SEQUENCE DESCRIPTION:

GATCTCACAG AAGTTATTCA ATCTCTAGGT TGCTTTAGCA TCTACTTGTG TAGTGAGAAG 60  
 AGTTATTTAC TTATATTGTG CATGAGGCCG TTTAGATATG TTAATGCAA AACAGAACTC 120  
 35 TTGCTAGCTA AACACAGTAG AACTTGAATT TTTTTTTTNA GAGGTATTAT AATANCAAAA 180  
 TCAGGTTATT TGTGACTTGG TTGAAGTAAA CGGTGCTCA GATAAANTAA TTNGTTAAAA 240  
 GAGTTGCCCA NTTTATGTCT TATANCTTNA ANCAANTANN TANTAATAAN 290

40 SEQ ID NO:3929

SEQUENCE LENGTH:287

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04654

45 SEQUENCE DESCRIPTION:

GATCTGGGAT GTGAGTGTAT CAAATCTTAT CAAATCCATT GACAAATCAG TGGTGCTATA 60  
 CTGGAAATGG CTAATCCTTT GGATGAAGGA CCTCATTTC CAGTTGCTTG GAACAAANGA 120  
 GAATTACAT NNNCTGTAA GAAGGGAGAG ACGGCAGTTG TTGGTAGACA CACAGNNAAG 180  
 50 GGTGCCCCAG AATAATTCTG TCTGGATTAA AGGTCCCAGG GAAGTGACGG NGCCATTTCT 240  
 GTACCAAGAG GTGAATATAA TTTGCATGTT NNGTGCAGT AATTAAA 287

55

SEQ ID NO:3930

SEQUENCE LENGTH:290

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04655

SEQUENCE DESCRIPTION:

GATCCCAAGA TGA CTGGGGT GGGAGGTCTT GCTAGAATGG GAAGGGTCAT AGAAAGGGCC 60  
 TTGACATCAG TTCCTTTGTG TGTACTCACT GAAGCCTGCN TTGGTCCAGA GCGGAGGCTG 120  
 TGTGCCTGGG GGAGTTTTC TCTATACATC TCTCCCAAC CCTAGGTTC CTGTTCTTCC 180  
 TCCAGTGCA CCAGAGCAAC CTCTCACTCC CCATGCCACG TTCCACAGTT GCCACCACCT 240  
 CTGTGGCATT GAAATGAGCA CCTCCATTAA AGTCTGAATC AGTGCAGAAA 290

SEQ ID NO:3931

SEQUENCE LENGTH:287

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04656

SEQUENCE DESCRIPTION:

GATCCTGAAG GGAAGGGGCA GGGATTTC TCCTCTCTG GTCCTGGCTC CCAAGGGCTT 60  
 CTGTCTTCAT CTCTGCATGA GCTCTCCTTC CCAGAGACCA ACTCTTTTN ATTNATTN 120  
 ATTNATTTT TNAATTTATG TCTGGAGCCT GGCTACTCTG CATTGGGNT TGGGGATGCT 180  
 GGGTGGGTGT GTGGTCCATG TTCAGCGTTC TAGCAACACG TGTGTGTGTG TGTGTGTAAA 240  
 GGCTATGCAG CCAAAATACC ATCTGGCCAG ACGGGCCAC CCACAAA 287

SEQ ID NO:3932

SEQUENCE LENGTH:286

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04657

SEQUENCE DESCRIPTION:

GATCACCTGT TCCTACAGTG ACAACTGGAC CTGGCCCGAA CCCCTGGCAT CTGGCAACAT 60  
 TATTACCTGT CGAAACAGAA GTAGAGATTT GAAATAGAGG ATGCCAGTTC CCATTTCCTC 120  
 CTGCTGTCTG GAAGGAAGTC TGGCTTTCCA GCCCAACTCT AAGCTCATCT TTACATACAA 180  
 AATAAGGGTA TGTTTACATG GAAAGCAAAA ATAGAACCAT GGATTACAG AAGGTTCCAT 240  
 AGCAGCAAAT ANCAGTGCTT ATGAAATAAA CATTTTAAAT ATTAAA 286

SEQ ID NO:3933

SEQUENCE LENGTH:283

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04658

SEQUENCE DESCRIPTION:

GATCTAATTG TGAATCGTT CACCTTGTTA AACATCTAAG TAAGTCTGTA GTCGCTCTGC 60  
 AAACAGCCAT TATATTTATT TACTCTAGAA GAACTGTAG AGTAGTAATT CGTGCTAATG 120  
 AGAAAAACAA AATACCATGT TCAAAACAGA TGTATTTGAA AACTTAATGA CATGGTTCCA 180

EP 0 679 716 A1

AAACTAGAG CATGTATGTA TGCTGTGCAT CATCTCAGCA GACCTAAAAT ATCCCCAAGT 240  
TGTCCCTTTA CAGCCATCAA TATATTNAC ACTCTGCGGC AAA 283

5 SEQ ID NO:3934  
SEQUENCE LENGTH:283  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
10 CLONE:HUMGS04659

SEQUENCE DESCRIPTION:  
GATCTGAGTC CTAGGNNCGC CCTCATTAC TAGCAGTAAG AATTTAAGTG GTGCATGGCA 60  
CATAGCACTG TACTAGATTC TGCAGGGGCA CAAACATAGA GCCAAACACT CTCCCTCTTG 120  
GAGAATTTC GACCCAGAAA AGGCCACGCA GTTCTAATT TTGTCATCGG TTCCTTTTGC 180  
15 TAAAAGGCAA AGGGTATGTT CCTTGCCTAT TGTCCAACAT ACCCCTTCCA AGATTGTGAG 240  
AAGATGGGTA GCTGGGCATC ATTAAATATT GAATCAATTG AAA 283

20 SEQ ID NO:3935  
SEQUENCE LENGTH:281  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS04660

25 SEQUENCE DESCRIPTION:  
GATCCACAGC TTGCAGGAGA AAGTCAGTGG CCCCAGACAC ACGTAACAGG GTGAGCACTG 60  
AAATAAGAGC ACGCTGGGGC GTCCACACCA AGGGACTACG CCCCAGTCTG CCCACCTATC 120  
TTTCTCCAT CATTAAACCA GCGCTCTTTC TCCCTGGACT TCCAAGTACC AATGACCTTG 180  
GGGCTTCTTT GCAGTTTAAA GGGAAAATGC TCTACAAANT AATTTCACTN TCAAACANNT 240  
30 CAGCAGAAGA ATAAAATNTT TTTTCTGGNA TATCTAGTAA A 281

35 SEQ ID NO:3936  
SEQUENCE LENGTH:280  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS04661

40 SEQUENCE DESCRIPTION:  
GATCCAATCA CATGGCAAAT GCCTCCTTTC ACAATAGAGC ATGGTGCTGT TTCCTCACTT 60  
GANCTGAAAC TTCATAGAAG ACCAGGTGAG ACCACAGAAT ACTAGATGNN AATGTTTCATG 120  
TAGGTAAGCT TTATATTTCC TTCCAAGCTC CATTGCTACA AAGGTGTAAA TAAAATACAT 180  
TTTTATGAGT TGAAGTAACT TCATGGTAGA AAATAATAAC TCTGCCTTCA AAAGCAAATA 240  
ATGGTTTCTT TGTTAACCAA TAAAGCATAA GANAATGAAA 280

45 SEQ ID NO:3937  
SEQUENCE LENGTH:278  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
50 CLONE:HUMGS04662  
SEQUENCE DESCRIPTION:

55

EP 0 679 716 A1

5 GATCTTTAAA TTTTGTCT TAGTTAAGTT CTGTATTTAG TGAATTAATT GCATCCTAAA 60  
AAGTCAAAC TGAAGGAC ATTTAAATG GCAAATCTAT TTTTACATG TTTGTGAAGT 120  
TTTTATTTT TAGTAAACAG ACCATCAGAA GAGAACAATG GTACAGAGCA GGGGTCAGCA 180  
GATGGATTT GTANNGCATC AACTTGTAAG TATTTTCAAG TTTATTAGCT GTATGGCTCT 240  
GGTTTCTGTT CCCTGTTCCA AATGTAAAG TCTACTGN 278

10 SEQ ID NO:3938  
SEQUENCE LENGTH:301  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS04663  
SEQUENCE DESCRIPTION:  
15 GATCGACATT TAAAAATGA GGTGAAAGAA AGCTATAGTG GCATAGAAAA AGTATAAAGC 60  
TCAGTTAGTT TTTTATTAT TATTATTAT AAAAGTTAAT TCAGGACTGA TGTGACCTAC 120  
CAGATTTCAG AACATGTGTT AATAGTATAT ATGCCACTGA AACTTAGGT CCTGTATCAT 180  
ACTTTTNC TTAAGACTTT TTAAGAAATA TTAAGTAAAC ATGTGGCTG CTCAGTGTT 240  
20 AATTGCAAGT TTTCAATCTT GGACTTTGAA AACAGGATTA AACGTTAGTA TTCGTGTGAA 300  
A 301

25 SEQ ID NO:3939  
SEQUENCE LENGTH:276  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS04664  
SEQUENCE DESCRIPTION:  
30 GATCTCCCTT TTACAGATAT CAGAAAGCAT GAAAAAATA GAATTGGATT TAATGCTTTG 60  
CAGATATTCT GTTTTTTTC CCAATTATTT GATTTCACCT ATATACATAT TCTTTNNTCT 120  
TTTTCTAGC TTTAGAAGCA AACCAACAAA AGCAGTTTGG ACTTTAGTAA CTTTTTTTA 180  
CAGCAGCATT TAGAACAGTT TGCATGTTCT GAGGAATATT ATATGTGTGT TGGGGGGAAA 240  
35 GGAATTCACA CTGAATAAAT TTAGAAATA ATAAA 276

40 SEQ ID NO:3940  
SEQUENCE LENGTH:277  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS04665  
SEQUENCE DESCRIPTION:  
45 GATCTTACTG CAAAGGAAAC TGACAGAAGA AAAAGAAAGT GCTTTTGAAT TTNTTCTC 60  
TGCCTGACTA GACAATGATG TTAATAATG CTTCAAAGCT GAAGAATCTA AATGTCGTCT 120  
TTGACTCAAG TACCAAATAA TAATAATGCT ATACTTAAAT TACTTGTGAA AAACAACACA 180  
TTTTAAAGAT TACGTGCTTC TTGGTACAGG TTTGTGAATG ACAGTTTATC GTCATGCTGT 240  
TAGTGTGCAT TCTAAATAA TATATATTCA AATGAAA 277

50 SEQ ID NO:3941  
SEQUENCE LENGTH:279

55

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04666

SEQUENCE DESCRIPTION:

GATCCTAAGC CATAGACAGG CTAATTGCCC ACCACTCCCA GGAATATTGA AATAGCTACA 60  
 TGACCATAAT GTGTTTAAAA TGTGGTATGC TCTTGAGATA TTAAAGTTT TGGCAGTAAA 120  
 ATACTCTGTT TTTAAGTATG AATGTATTTT ATTCATATTT CCTCTCACAA AGGAAAATGA 180  
 CTTCAGTATA GATTGTGTTT TATTAATAATG CATTTTTTAT TCTTAAGTGG TAGGAAGCAA 240  
 CATCCAAAAN TGCTTAATAA AATGCTTTTA AGCTGCAAA 279

SEQ ID NO:3942

SEQUENCE LENGTH:273

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04667

SEQUENCE DESCRIPTION:

GATCAACTGG CTTTCTCTA TTATGACTTT AGATGAATCG TTTAATAGA TTTGCTAATG 60  
 TTAAGACATC TCTGCATTTC TACAAGAATC TGATGTAGTC ATAGTATACT ATTCTTTTAA 120  
 TATACATCTC CTTTCAATGT TAACAGTGGT TATTTATGAT TGGTTGGTCC ATAGTAGATT 180  
 TTTATTTTGT GTTCTTATC TGNACTTTCT GATTTTCCTA CAAAGATNNG NGNNNTACTT 240  
 GTATAATAAA AATAAGAGCT TTAAATNGTG AAA 273

SEQ ID NO:3943

SEQUENCE LENGTH:268

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04668

SEQUENCE DESCRIPTION:

GATCGCGTCC AGATGGAAAA CGGAAGCAGA GGCTTCTAAT CGTCGCATTT ACTGGCTCCA 60  
 GTGCAACACA TCCATCTGAA AACACTCGGA AGTCTGGTGC TTGGAGAGGG TGCCATTGTC 120  
 TCTTGACAT AAGGTCATGA CGTGCTATG TCAAAAGTTC TTATATATTT CTTTATAAAG 180  
 CTGAAAGAAG GTCTATTTT ATGTTTTTAG GTCTATGAAT GGAACGTTGT AAATGCTTGT 240  
 CAAACAATAA AAATAACGAA AAGTGAAA 268

SEQ ID NO:3944

SEQUENCE LENGTH:268

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04669

SEQUENCE DESCRIPTION:

GATCTNGTGC CTGGAATAG CCTGAGGTGG CTCAGGAAGC GGAGAAAGGG TGCCAGACCA 60  
 TTCTCTGGCG GGGACCAGGG CCAAGGCC CAGGGCTGGA AGNAGACCAA GGGCAGCCG 120  
 CCCTGGAGGG ACATCAGTGC TTCCTCTTCC ACCCAATTCC CCCACGCGGT TCCATGTTTT 180  
 CCCACCAGCC TGTGGCGAA GTTGCTGCTC CGGCATTAG TACCTNNTNN NNCCAGAGAA 240  
 ATANNNGAG TTTCTATTTT ATGTAA 268

5 SEQ ID NO:3945  
 SEQUENCE LENGTH:267  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04670  
 SEQUENCE DESCRIPTION:  
 10 GATCAGATGG TTTAAGGCTA CAACACGAGG CCAATATCTG TATGTNAAGG AGACAGAAAC 60  
 ATCAATGTTT GGAGTATATA TTGACCTTCA TTCTTACTTT CTCCTTATTC TCTTATGTAA 120  
 CTGTTAATTT TTCCCTTCCT TGGCTCTATG TATTTAATTA TAATAAGCTT TACCTACAAG 180  
 CAAAACAAAC CAAACATGAA CAATGAAAAC TACTTTTGGT CATGTAGCAG AAACAGCAGT 240  
 CAATAAAGGA GAGAATGAAA CTAGAAA 267

15 SEQ ID NO:3946  
 SEQUENCE LENGTH:266  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 20 CLONE:HUMGS04671  
 SEQUENCE DESCRIPTION:  
 GATCTGTGA AAGCTGATGC CCATGTGCCC TGAGAGCTGC CTCTCAATCC CTGTCCAAG 60  
 CCACAGCTAT GGCCTTAATG TCACCACTGT TCTCACCTC TAGGCCCTGT GCCTGGAGGT 120  
 25 GCCTCCACAG CCGACCAGCA GCCACCCCGC CTGCTTCATC CACATCAGGA GGGTCCGGTG 180  
 AGGCTGCAGC AGTGGTTAAG GAGTAACACC TTCTGTATT AAGGAATTTT AAATAAAATA 240  
 AAATGTATGT TGGAGATACT GTTAAA 266

30 SEQ ID NO:3947  
 SEQUENCE LENGTH:265  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04672  
 35 SEQUENCE DESCRIPTION:  
 GATCCCTAGG TCTTGGGAGC TCTTGGAGGT GTCTGTATCA GTGGATTTC CATCCCCTGT 60  
 GGGAAATTAG TAGGCTCATT TACTGTTTTA GGTCTAGCCT ATGTGGATT TNNCCTAACA 120  
 TACCTAAGCA AACCCAGTGT CAGGATGGTA ATTCTNATTC TTTCGTNCAG TTAAGTTTTT 180  
 40 CCCTTCANCT GGGCACTGAA GGGNTATGTG AAACAATGTT NAACATTTT GGTAGTCTTC 240  
 AACCAGGGGT TTTTCGGTT TAACN 265

45 SEQ ID NO:3948  
 SEQUENCE LENGTH:265  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04673  
 SEQUENCE DESCRIPTION:  
 50 GATCTAGNAA ATGCATATAT TTAGCGGGTA TTGAAAGAT AGAAGCATT TTTATAACTG 60  
 AAGAGTATAA CACTTATCTN CTTAAGTAAA TGCTCTCATA ACTTGATAC ATTTTNCAG 120

55

EP 0 679 716 A1

GTACAAATTC AAAAGTATGT AAGCATTGTA TAATGTGACA ATTGTATAAT TTATGTAATC 180  
 TGATGCATGA NTCAGAATTT TTATATAATA TATGATTATN GACTTATAGT TGATTAANGT 240  
 GTTTAANCCT AAAANANAAN ANNNN 265

SEQ ID NO:3949

SEQUENCE LENGTH:263

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04674

SEQUENCE DESCRIPTION:

GATCTCTAAA CTAGCTCTTT TGTTAGTATC GTCTCACAAA CTGATTATTT TCCTCTTTCT 60  
 TTGGTAAGGT CAATAACTGG GAGATGGACA AACTAGAGAT GGAAGATGCA GTCACATTTT 120  
 TGAAGACTAA AATCTATTCA GTAGAAGCTC TTCCTGTTGC TGCTGTAAAT GTGCAAAGCA 180  
 CACAATAAAG TGAATAATCAA CCTTTTCATA TTAGGAGACA TGCATTTGTA AAAATTAATA 240  
 AAGATGACAA GTCAGTTNTC AAA 263

SEQ ID NO:3950

SEQUENCE LENGTH:261

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04675

SEQUENCE DESCRIPTION:

GATCCACACA CTACAGGAAA CAGTTGGCTT TGGAAATCCA TCTTTCTGAT ACCCCTCCAG 60  
 CTGAACAATT TTCTGCATGG GACTCTGAGT TCCTTTCCTT CCCAGAGAGT TTTACCGTAT 120  
 GAAGCCTGGA GCTGGAGAAC GAAAGAATCT TCACTATAAA CAGAGACCCA TTCATTTATT 180  
 TCCATTGGCT GTGTTACTGG ATGTTTTACT GGTGACGAG AACTGGGTC ACAATAAAAA 240  
 AATGGAGATA TGAAACTCAA A 261

SEQ ID NO:3951

SEQUENCE LENGTH:315

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04676

SEQUENCE DESCRIPTION:

GATCTGTTTG TAATACAAGG TATTTGGNCT TGTCTTTAAC TGTATAGTGA TTTGTGGGCA 60  
 GGCTGCAGGA GCCAGGATAA AGAATGCATG TTTGAAATCT NCTCTATACA AATGCATCCA 120  
 CACTCTCCNG CAAAGGGATG AGTTTCTTAG CCGTTTTTAC TTGATACAAA TGCTATTGTT 180  
 TCCTTTGGAN GGNGTGAAAA ANTGNANGCT CCACCTGCTC CGTGAGTAGC ATTGCTCTCA 240  
 ACTGGTGTTT CCAGCCGTTT ACATGTCTAC CCATTCTCTC CCTTANGGTT TTCTTAGGGN 300  
 GCNGGNGGNT GNNTN 315

SEQ ID NO:3952

SEQUENCE LENGTH:258

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04677

SEQUENCE DESCRIPTION:

5 GATCTAAACT TGATATGTTA AATTAAATT TAATTCCCC AAGTGTGAGT ACTATATGTN 60  
 ATTGTAGATA ATTTGCAAAC TACAAAAAAT AAAAATAATT GGCTGGGCGT GGTGGCTCAT 120  
 GCCTGTAATC CCGGCGCTTT GGGAGGCCGA GGTNGGTGGA CCACCTGGGG TCAGGAGTTC 180  
 AGGACCGGCC TGCCCAACAT GGTGAAACCC GTCTCTGCTA AAGGTATAGA AGCTNGCCGG 240  
 GTGTGGTGGT GGGCACCN 258

SEQ ID NO:3953

SEQUENCE LENGTH:258

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04678

SEQUENCE DESCRIPTION:

15 GATCCTCACT CAACGAAAAC TCGNTTGAA ACTGTTCCGN CTGGCAGTCC TTTTTTGTG 60  
 TTTTCCATCT CATTCCCTT CCATCTGAAA GTGGCATTCA GCTGACTNGC TCATTTAGAC 120  
 20 NGTTCACGGA GTCTGAATCT GCCAACGTGG TGTGGAGGC TCCACCTTGA AAAGGGCCAC 180  
 AGTCAGGGCA ACTTTCCCCA TACAGGAAAA CTTGAAAATT ACATCAACAG TCTACGTCAC 240  
 AGCCAAATTA TATTTCCN 258

SEQ ID NO:3954

SEQUENCE LENGTH:257

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04679

SEQUENCE DESCRIPTION:

25 GATCCAGTGG CTGCAGCTTC AATCCCAGTG CTGNANTCAC ACATCCATTC TGCCCTGGGG 60  
 GACCCGTGGAG CCTACTTGTT CGCTTTGCAT TTCATTGATT GACGNCTCCC TTCAACAAGC 120  
 30 ATTTACTGNG CGCCTACTAT GTACTAATGC TAGANGTTAG ATGTACAAAG AAGACAGTTT 180  
 35 TCATCTCTA GGNACTCATA GGCTAATGGT GAGACACACA GACANACATC ATTATATTAN 240  
 AATANGCTAA GNGAAAA 257

SEQ ID NO:3955

SEQUENCE LENGTH:257

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04680

SEQUENCE DESCRIPTION:

40 GATCTACAAG GCCACACAGA TAATTNCAA TACATCTCAT TTCCTTCTGA TTCAGGCCTC 60  
 GGNAGACCCC AAGGGGAAGG AGTTCTCATG GGNCACTATA ATCNATGAAG CTGAAGTTGN 120  
 45 AATATAGANG GCAGATTAA AGTTACCATT TTTTTTAAA CACCAGCTAT GGTCCTTTCA 180  
 AAATTGTACA AGCTGTCAGT ATCACCTGCA CATGAGCAAT TTAGTCTNNN GGNGGNGTGA 240  
 50 GAAGTTTAGG TCTTTNN 257

SEQ ID NO:3956



SEQUENCE LENGTH:256

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04681

SEQUENCE DESCRIPTION:

GATCTGCCCC CCTCGGCCTC CCAAAGTGCT GGGATTACAG GCGTGAGCAT GAGTGCCCAG 60  
GCAGAGAAGT CCTACACCAC GTGTCAAAC CGGAACACAA AGGGNCACTG TCTTATTGCT 120  
TGGTACAGTA CTCCTGTTTG TTGAGAGCCC ATTTACTAGA GCAGCTCTGT TTGTGCTTAA 180  
TGAAAGCTCT TTTCTGAGAG GCAACAGAGT GTGTTCTATC ATAAATGAAG CGCTCTTCAA 240  
GAACTTCCTG AGCAAA 256

SEQ ID NO:3957

SEQUENCE LENGTH:254

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04682

SEQUENCE DESCRIPTION:

GATCCACCGT CGGATTCCGT CTGCAGAGGA GGACGTAGGG GGCCGTCACA CCCACCAGGC 60  
CTCCCTGCTG TGCTTTAACA CAGGCAGAAG AGGTTTCATGG CAATATAATA GTCAATGAAC 120  
TTTCAGTTTA AATTGTGTAC ATTTTAAAT TGTAAGATTT TTAGTGTATA TTGATGCATA 180  
GTGTGATTCA ATAAATTGCT TGTAATTTAA AACTATTTA ATATTCAAAA TAAATATAGT 240  
TATATATTTA TAAA 254

SEQ ID NO:3958

SEQUENCE LENGTH:252

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04683

SEQUENCE DESCRIPTION:

GATCTGTTTT AAAGTTGGGG GGTGGGAAAT TTAGCTGACT AGGGACAAAC ATGTAAACCT 60  
ATTTTCCTAT GAAAAAATT TAAATGTCC CACTTGAATA ACGTAATTCT TCATAGTTTT 120  
TTTAATCTAT GGATAAATGG AAACCTAAT ATTTGTAATG AATTATTAG ACAGTTCTAA 180  
GCCCTGTCTT CTGGGAGTTA TCANTNTTAA AGAGANCTTT TGTGCAATTT CAAATGAAGT 240  
TTTTATAAGT AN 252

SEQ ID NO:3959

SEQUENCE LENGTH:251

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04684

SEQUENCE DESCRIPTION:

GATCCGGAGT CTTTGAGGCC ATNTTGAAC TACTAATTCA ACTAATCCTG AACCACCATA 60  
TTTTCATATT CATCCATGAA GTGTTAAGTG TTCTTATGAT TTAAACCACT TAGCATTGGT 120  
TTTTATATTT CTGCAGCCA AAATCTTCT AACAGTAAAA TAAAGTTTCA AGTTTCATAA 180  
GTGCCAATGA TTTTAAATG TTAATAAATT TGTACTAAAT AAAAATGGCA ACAGGAGCAG 240

GTAAACCTAA A

251

SEQ ID NO:3960

SEQUENCE LENGTH:251

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04685

SEQUENCE DESCRIPTION:

GATCTTCTAA CTTATAAATG TCAAATATAT TTTGTATTA GATTGTGCCT ATNATGAGAG 60  
 AAATCTTTAA TGTATATTTN ATGTATGCTG AACACATTTT TATAATTTGN CACACTTGGA 120  
 GGCATGGTCT AGTAATAATA ATGTAATATG TACCTTGCTG GTTANTATAA CTAAGATTTT 180  
 GCCTTTATTG GGTTAGGTAT CTNTTNTTAA TTNTNGCACC NGNTAGCTGN CTTCTACTGA 240  
 GTAAAGANTT N 251

SEQ ID NO:3961

SEQUENCE LENGTH:251

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04686

SEQUENCE DESCRIPTION:

GATCCAACCT CAAAGTAAAA GTTGGAAAGG GCAAGAGTCT TTAAAGCGGA ACTTCAATTC 60  
 TTTTNNCATG GTTACTTATA TATAATGAAT ATAAATAGAC AAATAGGACT TGGAAAATGT 120  
 GGTATATTCT AAGTCAAGAT GCTATGAAAT TGTATAGTT TAAGGGNCAT TCTTAAGAAG 180  
 GAATTACTTA AGTNCATTAC TCTNCTCATT TCAAGGACAT GAAAAAGTAA AGGATGGTCT 240  
 GGCACATTTT N 251

SEQ ID NO:3962

SEQUENCE LENGTH:250

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04687

SEQUENCE DESCRIPTION:

GATCCTGGAG ACGCCATTTT CGAGATTGTT CTGCATATTC ATTTGCACAT TGTTGTCTGG 60  
 GTTGGACATG CGTGTGGGCT TCAGTGTGAG GCTTTTAATA TGTATATCCT GTTATCAATA 120  
 AAACAATTAT CCAAGTGGTT GAATCCTGTG AGACTTGGCA AGTGTGTGCA AATNAAGTAT 180  
 ACTTGACTTT TCAACCTCTT CTTTCAATGT NGCNNTTATA TGAATAAAG TAATCCATTT 240  
 ANCAGTAAA 250

SEQ ID NO:3963

SEQUENCE LENGTH:245

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04688

SEQUENCE DESCRIPTION:

GATCGACATG AGATACAGAC GAGAGATTAT GTCTCTTATG GCTTTATCAT CAATTAAACT 60

5 TAGCAAAGTC TGTTAAATTT ATTCAGAGT CTCCCAGCTG TGAAGTAG AGTTCCACTT 120  
ATGTCATCCA TATCTGCACA GTAATCTTTT TTTAATCCT AACTTTCTT AACAGGTTTC 180  
TNCTCCTNAT TCTAGACAAT AATGCTATGT GTTTTCCTTG AATACCATGA TTTTAAACTN 240  
TTAAA 245

SEQ ID NO:3964

SEQUENCE LENGTH:245

10 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04689

SEQUENCE DESCRIPTION:

15 GATCGGTCAT GCTGGGGCCA AAAACATGGC AAGAAACGTC CCACTGTCAA CCTCCCGGGC 60  
AAGCGTGTGC ACCTGCAGCT CAGGGCCAGC CCACCACACT GCCTTAGTGA CACTGCAGCC 120  
GGGGGAGCCA CAGGCCGCCA GCAGGCTGAG GAACAATGCC GTGTGACCTT TCCNNCNNNN 180  
AAAAACAAA AACTGCAATT TTTATTCAAA TAAAAAAGG GTAAAAATAA AAGTTAATAA 240  
GGAAA 245

20 SEQ ID NO:3965

SEQUENCE LENGTH:244

SEQUENCE TYPE:nucleic acid

25 TOPOLOGY:linear

CLONE:HUMGS04690

SEQUENCE DESCRIPTION:

30 GATCATGGAA AGTTTCAGTG AAAACCATCA TGCTGTCTTC CAGAACCACG TTCTCCTCTG 60  
AGGAGGATGA ATGAAGGTTG GGTTCAGTC ATCATGCCTG CCCTTTTTTT CTTTGTATTG 120  
TTTCTTAAGC ATCTCAGAGT CCTCTCATGG AATTGTTTT CTATTTCCCC TCCCAATCTC 180  
CACCTCACTC CATATCATAA GACATGTCTG CATTCTGGAA TATTAAACGT GGACATGGCT 240  
CAAA 244

35 SEQ ID NO:3966

SEQUENCE LENGTH:244

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

40 CLONE:HUMGS04691

SEQUENCE DESCRIPTION:

45 GATCATGCTT TTCCCTACTA AACTTCTGTA ACTGCATGTA TGATACATTA TTGCAGAGGT 60  
AAGAGATAGT TTAATGGATT TTTAAAAACA AATTACTATA ATTNATCTGA TGTCTCTAG 120  
TTGCATTTTG CTGAAATGTA GTGCTGTTCT AAATTCTGTA AATTGATTGC TGTGAATTA 180  
TCTTTCTGTT GAGAAGAGTC TATTCATGCA TCCTGACCTT AATAAATACT ATGTTTCAGTT 240  
TAAA 244

50 SEQ ID NO:3967

SEQUENCE LENGTH:242

SEQUENCE TYPE:nucleic acid

55 TOPOLOGY:linear

CLONE:HUMGS04692

SEQUENCE DESCRIPTION:

5 GATCCAAGCC CTTGTTTCTAGA TTTGGTGCCT GATAAGACAG GGGTTTCTCT TTTTGTGACC 60  
 TTTATTATTA TTATTTTGTG AACTGTTGTA ACCAGTTAGC TGTGTGTTT TAAGATAGAA 120  
 AGGAACAAGA CTAAAATTGT AAATACTTTG TAAACATCAG CATTGTACT TGAATAGTAG 180  
 GATTTTAAAG GGCATTGATA GCATACCAA CAAAAGGCAA AATAAAGTGA CCTTTTATA 240  
 AA 242

10

SEQ ID NO:3968

SEQUENCE LENGTH:241

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

15

CLONE:HUMGS04693

SEQUENCE DESCRIPTION:

20 GATCTTCCTC CCATGAAAGA AAAANCAAGA ACCAGAGGCG TAGACTNACT NAAGACACAA 60  
 CTCCTGGCTT TCTNAAGCTA TGGACTTGA TTGGATTGCT GGGGGTTTT AGAGAAAGGT 120  
 GACAAATTC AGTACCTCTG GCATGCTGTC CCAGGAACT AGGGTCCCA CTAACCTATG 180  
 AGGTTTTTAA ACACATTGAA AATGACATGA CACCTAAAT AAATTTGGAT TTGCTCATAA 240  
 A 241

25

SEQ ID NO:3969

SEQUENCE LENGTH:240

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04694

30

SEQUENCE DESCRIPTION:

35 GATCAAGGGT AAGAATAAGT ATCCACCTCT TTCCTTTTAA AAATTTTCCC TCAGAGTCCC 60  
 TATGTTGCAT ATTTNATTCT GTTCAGAATC TAACCTTTCC CTAAGGCTTA TCTTTCTAAC 120  
 AGATACTAAT TATGAATGGG CATCAACAAC TCTAATTAAA CCATTCTTTA AAACCTCTCT 180  
 GGGTGTTTTC ACAAAGAAA TTCTCCCATG TTATGATGTG TGTGGTTGCT AAAAAGTAAA 240

35

SEQ ID NO:3970

SEQUENCE LENGTH:238

SEQUENCE TYPE:nucleic acid

40

TOPOLOGY:linear

CLONE:HUMGS04695

SEQUENCE DESCRIPTION:

45 GATCCAGACT GGCCAGATT GAACTCCAGC ACTATTCCTT GATACCTCTG AAACCTGGGA 60  
 CAAGTAACTT AGTCACTATG TATGAAAAGA GATAATAATA CTAGTACCTT CCTCATACTA 120  
 CAAGACTACA AGATGTGGTC AAGACCAGAA ATATATAAGC ACTGTAAAA CAATGTAAAA 180  
 CCAAATGNAA ATTCTTCATT TGTATCTNCC AAAAATAAAA AAATAGCTAT TTGGGAAA 238

50

SEQ ID NO:3971

SEQUENCE LENGTH:238

SEQUENCE TYPE:nucleic acid

55

TOPOLOGY:linear

CLONE:HUMGS04696

SEQUENCE DESCRIPTION:

5 GATCAACCAG AAAAAAAAAA TATNATGAAA TGGATACACA CAGTGGACAC CTGTGAAGTT 60  
ATCTTAGCTC CCCCCAAACT GAGANGTACA AATTAGTCTC CAAACCTAAT TACCAGTTTA 120  
CAGGAAACAT NGGGAATAAA AGANCAANTT AACACACAA AGAAGCAAAC ANCCAANTGC 180  
ACAGTTTGGG AAATTCTGCA GAGGTAATGG CCTAGTTTTT TANCCAGTAC ATGTCAA 238

10

SEQ ID NO:3972

SEQUENCE LENGTH:237

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

15

CLONE:HUMGS04697

SEQUENCE DESCRIPTION:

20 GATCATAAAT GACAGGTGTG TGGAGGTCAT TGCAAAGGAA GGACAAAACC TGAAAGAGCT 60  
ATATTNGGTG TCCTGTAAAA TCACAGATTA TGGTAGGTAA TGANCCATTT NCCTAATCCT 120  
TTCTAAGANT AAAANGTTAC AAAATCATTG AAAGTNCTTA AAAGGAAATC AAGANCTATA 180  
TCATAGAGAC TGTCTATCGT CACTTATGCT CATNGTGACC NTACCAAANA NTAAAAAN 237

20

SEQ ID NO:3973

SEQUENCE LENGTH:236

25

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04698

SEQUENCE DESCRIPTION:

30 GATCGTAGAA GCCAAATGAA ATGTGACATA TCTACTGACT GATGACAAGG GAATTCATT 60  
AGGAAGAAGG TAAAGAAACA TCGTTGAGTA GCCTACCTTG ATTTCTGTCA AGTTCATAAC 120  
CAGCTTCATN CTTTAAAGG CTTCAGGTTT GAAATTAAGT CAACTGCATG CAGCTTTGCT 180  
GATAAATGAA TAATTCTCTT TGATGCCATT TATGAGAAAA GACTTCAATA TCTGTN 236

35

40

45

50

55

SEQ ID NO:3974

SEQUENCE LENGTH:173

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04699

SEQUENCE DESCRIPTION:

GATCTTCCAG TTTAGGAGCA ATTTGGTGAA AGGAGTCGGG TGACCAGAGC TGGGAATAACC 60  
GTCTGCATGG CTGCACTCTG GTANCAGAGT GGNGACAGAN GTAAGGATAG TGTGGAGGGC 120  
ACAGTTGCAA GTTGAGTCTT TCCATGAGAC AATGTGCCAA AGTTAAAAA AAN 173

SEQ ID NO:3975

SEQUENCE LENGTH:234

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04700

SEQUENCE DESCRIPTION:

GATCCCTAAA TAAGTAGTTA TTCTGTTTTT CCTGATTTT AACTTTTACT AATAGAATGA 60  
GAGTAAATAT TTTTGGGTAT GTGGCTTCTT TTGTTCAACA TTGTTTAAAG ATTCATCCGT 120  
GTTGCTTGTG TAGCTGTAAT TTGTTTAAAT CTTTATAGTA CATTGAGTTT TGTNAATGCT 180  
TATTGTAGGA CTGTACCATA ATACAGGCAG CATGCTGCTG ATAAACACTG GAAA 234

SEQ ID NO:3976

SEQUENCE LENGTH:234

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04701

SEQUENCE DESCRIPTION:

GATCCTCCTG CCTCGGTCTC CCAAAGTNCT GGGATTGCAG GTCTTGGTCT TGATNCCAAG 60  
TTTGGGAAAG NAGCTAAGAA GACATCCAC TAGGAAGAGA GAGACTACCT CCACATCAAA 120  
AATATTAAAG TNATTATCTC AAACAGTGAC ATCTCTTGGG AAAATGGACT TAATAGGAAT 180  
ATGGGACTGA GTTCCAGTCT TTTTNAATAA AATAAAATCA AGCAANATCA TAAA 234

SEQ ID NO:3977

SEQUENCE LENGTH:234

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04702

SEQUENCE DESCRIPTION:

GATCAACCCC GTGAAGGTGG CCAACCTGGT GAAGGCGTAC GTGGACAAGT ACAGGCACAT 60  
ANCNCAGGCA CANGAAACCA GAGGCCGGGG AGGAGCCGCC CACGCAGGGG GCCGAGGGCT 120  
GAGGCCAGGC AATCAGGGG TATGCCNGGG AGCTGTCGGG AGTGGCGGGA ATCGGGGCCA 180  
TGCCCGGGGA GCTGTCGGGA GTNGCGGGAA TNGGGGCCAT GCCCGGNGGA GCTN 234

SEQ ID NO:3978

SEQUENCE LENGTH:231

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04703

SEQUENCE DESCRIPTION:

GATCATCGCA TTGAAATGGT TTTGGGAAGT ATGGAATAATT AAATGGATTT TTGAGACACT 60  
AGTTTATTGG CTATGCAAGT GACAGTTTGG AAAAAGGCTG AATCTTATTG TTGGAGCCTA 120  
ATGTAAATGC ATATATAAAT TCTGACTGTA TTTCAGTCAG TGTTCCTTG GAAAAATTCC 180  
CAGATTGGAA GCAGAAAGTA CAGACCAAAT AAAGATTATT CACCCACCAA A 231

SEQ ID NO:3979

SEQUENCE LENGTH:231

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04704

SEQUENCE DESCRIPTION:

GATCGCTCTC ACTGGCCTGC TGCAGATNAG CCAGGGGGAG CCTAGGCCCA GCTCCTCCGC 60  
GGTTGGCCCC CCAGACCATA CCTCTGACCC ACCCAGCCCC CNNTGGTAGC CCCAGCAGTT 120  
CTCAGGGTGC TGACCTCTCT CTCCCACAGA CCCCAGACAC CCATTGTCCA TAGCCTTCTN 180  
AGGGCAGACT GGGCTGGTTG TGTGACAAT AAAACAGTGT TGGTTTGCAA A 231

SEQ ID NO:3980

SEQUENCE LENGTH:242

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04705

SEQUENCE DESCRIPTION:

GATCAAGTCT TGTCACTTCG TGCCCTCTTT CCCCATGTTT CCTGGGAAGA CGGGTGGTGG 60  
CAGAGTGAGA AGGCCACTGG TTCTGTGCCG CAGCACGCAA AATTTAGAAT TCTACAGACT 120  
AGCTCTATAC GTAGTGAGGA CCCAGATTTA GAGAACTGA CCAATATTTA TCTCCGCATT 180  
TGTGTGTGTG TCCAACCTCG TAGGNAATA AACCANCAAG ACAAATGAAC TGTGCTTCCA 240  
AA 242

SEQ ID NO:3981

SEQUENCE LENGTH:230

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04706

SEQUENCE DESCRIPTION:

GATCCACCTC TACACCAGCC CAGGAAGCCC CATCTGTGCC TGCCCTCAGG TGGTCCACCA 60  
GTCTCCCCCT TTGGTTCCCT TCCAGTCTNT TCCCCCTTTC TATCCCAATN ACCAATAGAA 120  
ATGCTAACAT CCCTGCCTGG TAGCCAGACT AGCCCACTAA AGCTCCCTG TAAATGGGGG 180  
CTCCATTAGT TCTGCTGCCG AGACTAATAA ACGATTGGT TGGCTCTAAA 230

SEQ ID NO:3982

SEQUENCE LENGTH:229

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04707

SEQUENCE DESCRIPTION:

GATCTATTCC CACATGANGT GCGCCACCGA CACGNAGAAC GTCAAATTTT TTTTCGACGC 60  
 TGTACCCGAC ATCATCATCA AGGAGAACCT CAAAGACTGT GGCCTCTTNT NAGGCAGGGC 120  
 CTGTNCTGCA GTCGGGGACA AGGAGCTTCC NTTTGGCAAG GCCGGGGCAC AATTGCACT 180  
 CCCCTCAGCT AGACGCACAG ACTCAGCAAT AAACCTTTGC ATCAGGAAA 229

SEQ ID NO:3983

SEQUENCE LENGTH:226

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04708

SEQUENCE DESCRIPTION:

GATCTCCCT GCCCAAGTCT TACTTCGTGA GCTGGCCTTG CTCCCCATCC CCCAAGTGCC 60  
 TCACCACTCC CCCAGACTGG GTGAAGGTAC AGCTGGCTCC TTTCGGGGGT GCAGCTTCAA 120  
 CTCTCTCGGC GGTAGGGCGG TGCCATCCCC ACCCATAGGG CTGGCTCACA TCCAGTCACT 180  
 CCCAACACCG TCCANCACAC AAATAAAGA CCCTTTGGCC CTGAAA 226

SEQ ID NO:3984

SEQUENCE LENGTH:226

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04709

SEQUENCE DESCRIPTION:

GATCACTTGN GGTCAAGCGT NCGAGACCAN TCTGGTCAAC ATGGCAAAAC CCCGTCTCTG 60  
 CTAATAATGC AAAAATCAGC TGGGTGTAGT GGTGCGTNCC TGTAATCCCA GCTACTGGGA 120  
 GCTGAGGCGA AAGAATTGCT TGAACCTGGA AGGTGGTAGG CTGCAGTNAG CCAGGATTGT 180  
 GCCACTTCAC TCCAGCCCGG GCAACAGNGC AAGACTCTGT GTCAAA 226

SEQ ID NO:3985

SEQUENCE LENGTH:225

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04710

SEQUENCE DESCRIPTION:

GATCCTGGGC CAAACTGATT TACTATTTTA AATTTNAGTT TTAATGNGAC AGGGCCTTGC 60  
 TATGTTGCAG GGTGGTGTG AACTCCTGGC CTCAAGCAAT CCTCTTGCT CAGCTTGCCA 120  
 AAATGCTGGC ATTACAGGCC TGAGCCACTG CCCCTGGTCT GATTTACAAT TTTNAATTGA 180  
 GGGTTAGGGA GTCATAATAC CANCAAAGAT GGTAAGGA ATTTN 225

SEQ ID NO:3986

SEQUENCE LENGTH:221



SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04711

SEQUENCE DESCRIPTION:

GATCATCCTC TAAACATTTT ATCATTTATT AATCCTCCCT GCCTGTGTCT ATTATTATAT 60  
TCATATCTCT ACGCTGCAAA ATTTGGGTCT CAATTTTAC TGTGCCTTG TTTTACTAG 120  
TGTCTGCTGT TGCAAAAAGA AGAAAACATT CTCTGCCTGA GTTTTAATT TTGTCCAAAG 180  
TTAATTTTAA TCTATACAAT TAAAACCTTT TGCCTATCAA A 221

SEQ ID NO:3987

SEQUENCE LENGTH:221

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04712

SEQUENCE DESCRIPTION:

GATCATCATC TGTGAAGCAT CATGGTAGCT TCCAAGCATT TCGGCCCCAC TGGCCAGNTG 60  
CATCCAAAAC ACATTCAGGA AACCCGAGAG TTGTAAGTTG CACATGTGTG GCCTACAGTG 120  
ACTTCCATGT AGTAACAGGG NTGNGCAAGG CANGNTCTCC ACCAGACTTA AAGCATTCAA 180  
CCACTCTGCC CCCAGGGCGA CACTGGNCAT GTGGTTCAAT N 221

SEQ ID NO:3988

SEQUENCE LENGTH:220

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04713

SEQUENCE DESCRIPTION:

GATCTTTTAA AGATNNNAAT AAAGAGCTTT CCTAAATAAA ATAAGCAATA TTAACTTTA 60  
GAAACTGTAC TCTATGAAAC GTGTTTATG AAANCATCTN TTACAAAAAG TGCTTACTTA 120  
ACTCAGCAAG AAAGGTTTAA TGTACACATT TNACANCTAA ANTCAAAACC TACAAGAAAC 180  
TGCACTGCCT TCACTATTAA CAAATCGGCC TACAAGGAAA 220

SEQ ID NO:3989

SEQUENCE LENGTH:218

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04714

SEQUENCE DESCRIPTION:

GATCTGGCTA TCTCATTGAT TATATTTTC TTCCCTTATA CTGCAAAGTA CATCATAGGT 60  
ATAATTTTAT TTTGAGAAAG AACTATATTC CAATTTTACC TATATATTCC TACTGTAATA 120  
ACCAAGAGGA CATTTCAAAA ATGTATATGC TACTATTTTC AGAAGGNTAT AGATACTAAA 180  
TCTTTTAAAG CCTTATTAAA CTATGTTTAA TATTGAAA 218

SEQ ID NO:3990

SEQUENCE LENGTH:217

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04715

SEQUENCE DESCRIPTION:

5 GATCTGTAA ATTTGATTTT ACATGTACAT TTGAATGCCA GAATTTCTAA ATAAATCCCC 60  
 TGGTTAGGAA ATTTTAAAG TCAAAGCTTG TTTCTTCAA CCACTACCTT CTACATTGGT 120  
 TGACTTAGAC CGTAAGCTTT TTAAGTTTCT CATTGTAATT TACCTTCTCA TGCAGATTGC 180  
 TGATGTTTTA TTAAACCTTA TTTTACAAA AATGAAA 217

10

SEQ ID NO:3991

SEQUENCE LENGTH:281

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

15

CLONE:HUMGS04716

SEQUENCE DESCRIPTION:

20 GATCTTATTA GACTCATACA TCTAATTATA GAAATACATA GACTTGATAG AATTNATTT 60  
 TCAGGCNTGA AGAAATATTC TTTGGAAAAG CTAAATTTT GGTGATTGAC ATAAAGATTT 120  
 ACTNGCTCAT ATTANCTNGG GGGGNTAGTA CTCTCCAAGA ATTAATGTGC CCTAAAAATT 180  
 TTCCTCCAAA ANCTTATCCT TATCATGTGA TAATGANGAN CATTGATTT CTTGAAAGGA 240  
 GACTGCTGTA GGCAGCATCT GGAATGCAA NTNNGGGGNN N 281

25

SEQ ID NO:3992

SEQUENCE LENGTH:217

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04717

30

SEQUENCE DESCRIPTION:

35 GATCAGCCTG GGCAACATAG CCATAGTGAG ACACCAACTC TCTACAACAG CAAAACAAAA 60  
 CAAAACAAAA AAACATGCAG CTGGGCATGG TGGTNACACC TGTGGTCCTA GCTACTCAGG 120  
 AGGCTGAGGT GGGAGGATTG CTGGAGCTAG GATGTCAAGN TTAGTGANGC TATTCGACCA 180  
 CTNACTCAGC TGGNAACAGA NGAGCCTGT CTAGAAA 217

35

SEQ ID NO:3993

SEQUENCE LENGTH:216

SEQUENCE TYPE:nucleic acid

40

TOPOLOGY:linear

CLONE:HUMGS04718

SEQUENCE DESCRIPTION:

45 GATCATTTTT TGAGGCAGGA GCATAACACC TTCTCTAGGA TTTGTCAGCT TCTAAAAAGA 60  
 GCCTTTTGTA AGGACTTGTA TGAGCTTGGG TTTCACCATC ATTACTGGGG AGGCACTAAG 120  
 ACTGCACATA TCTCTGGGTG AAGTAATGTC TACACANCAC CTTTCATAGC AATAGTTCCC 180  
 AGCTAGCATA CCTGCTTCTG CCAGTCCAGG GCCAAA 216

45

SEQ ID NO:3994

SEQUENCE LENGTH:220

SEQUENCE TYPE:nucleic acid

55

TOPOLOGY:linear

CLONE:HUMGS04719

SEQUENCE DESCRIPTION:

5 GATCCAGACT ATAATCCTGC TGACCCAGAG AGTGACTCAG CTGACTAATG GACTGTCCCC 60  
 ATCTGCAGAG AGGCTTGACT GCCACAGCAT CTGTGGCTAT GCTCAGAGGG TTATGATTTT 120  
 CCTTTCTTTT NNNTAAGAAA AAATTATTTT CAGGAGAATA TTCTTCTGAT AGCTTTCATC 180  
 ATTGAACCTA ATAACTGAC CTAAAAATTT CAAATATAAA 220

10

SEQ ID NO:3995

SEQUENCE LENGTH:215

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

15

CLONE:HUMGS04720

SEQUENCE DESCRIPTION:

GATCTAAGGA AGAACTTGCT GCTGCAGTAT TGAACTGTG AAGAACTGAC ATTTGAAGAA 60  
 AAATAGATTA CCGTTGCGGG ACTAGAATGG GCGACTGCTT GGAGCCAGTG CTTGTTTTTA 120  
 20 TCTAGGACAC TTACTGTCCT GTGAAGTAGA ATACATTTAT CTGCATTTAG TTTGTTAATG 180  
 TCTGAAATGA ATAAAAAGAG GAAATTGCGA TTAAA 215

SEQ ID NO:3996

SEQUENCE LENGTH:214

25

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04721

SEQUENCE DESCRIPTION:

30 GATCCAGAGA CAGAGGCAGC CTGTCTTTTC AGTTGGTTTC TGCTTTTAAT TTACTTGATC 60  
 AATTCAATTGT TACTGTTCTG TTTTTCCTAT TAATCTTTTG TCAACTTCCT GATTATGTAA 120  
 CAAAGTATGT ACAGTCTACT TTTGACCTAT TTTTATCACA GTATNATTNA TTNCTTCTTT 180  
 CAATAAAGTA CTNGNGCATA TTTCCACTGC CAAA 214

35

SEQ ID NO:3997

SEQUENCE LENGTH:214

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

40

CLONE:HUMGS04722

SEQUENCE DESCRIPTION:

GATCCGNAGT TCAAGGGAAG AGGAAGTTGC CTCNAGCTC CATCTCTCTG CGCTGCTAGA 60  
 CATGGTGGAC ATTTGAGCAG CCTGACCTGT GGGGAGGGGG TCTCTCCCGA AGAGTTTCTG 120  
 45 TTTTACTCA AAATAATGTT ATTCTCAGAT GCTTGATGCA CTGTTGGAAA NGGGGATTAA 180  
 TTTAATCATG CAGATAAACC ATTTAAATGT CAAA 214

SEQ ID NO:3998

SEQUENCE LENGTH:212

50

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

55

CLONE:HUMGS04723

SEQUENCE DESCRIPTION:

GATCGAAACC AGCCTGGTCA ACATGGTAAA ACACTGTCCC TACTAAAAAT ACAGAAATNA 60  
 GCCAGCAATA CAAAAATTGG CAGCTGTAGT CCCAACTACT TGGNAGGCTG AAGCACAAGA 120  
 ATCGCTTGAN CCCAGGAGGT GGGAGGTTGC AGTGAGCTGA GATTGCGCCA CTGCACTCCA 180  
 GCCTGGGCGA CAAAGCGAGA CTCTGTCTCA AA 212

SEQ ID NO:3999

SEQUENCE LENGTH:211

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04724

SEQUENCE DESCRIPTION:

GATCTCAGNA ATTGGAAAAA TTGTCCTGTC TGTCACCTGT TTTGTTGCCT TAATAAGCAT 60  
 CTGAATGTTT GGTGTGGGG CGGGTTCTGA AGCGATGAGA GAAATGCCCG TATTAGGAGG 120  
 ATTACTTGAG CCCTGGAGGT CAAAGCTGAG GTGAGCCATG ATTACTCCAC TGCACTCCAG 180  
 CCTGGGCAAC AGAGCCAGGC CCTGTATCAA A 211

SEQ ID NO:4000

SEQUENCE LENGTH:210

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04725

SEQUENCE DESCRIPTION:

GATCAAGGCT ATGAACATCT TGTGAAGTAG GATGTTAAGT CTGCAATAT CAGAGTGAAT 60  
 CCAAACTTAT CAATTCAACA CTGGATTGTA AAACAGCTCA AAAAAAGACT AAAACACAG 120  
 CTCTACACTT TAGGAGGTTG GGGCAGGCAG ATTGCTCGAG CTCAGGAGTG GGAGACAAGT 180  
 TTAGGAAACA TGGAAAAACC CTGTCTCAAA 210

SEQ ID NO:4001

SEQUENCE LENGTH:209

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04728

SEQUENCE DESCRIPTION:

GATCAGCATT CATACCATAG TAACTGATGT TGAAAACAGC ACAAATAAAC CAGAAGTTGA 60  
 AAATGGCAAT AACATGCTAA AAATTTGCAA GTCAATTTGA NNACACTTGT CCAAATCTTG 120  
 ATTTTTTTTC CTTCTCTATC GTTCCCCCCC CACCACCAGC TTTATGGAGG TATAATTAGC 180  
 AAATAAAAAG TATACATATT TAAGGTAAA 209

SEQ ID NO:4002

SEQUENCE LENGTH:209

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04729

## SEQUENCE DESCRIPTION:

GATCCTATGA ATTAATTCAG AAAGCAACTA AAATAACAAT GGCCTGCCAA ATGTCATTTT 60  
 GTAAATATAC GTCTATGACT TTAGGAGCTG TCCTGGTTTG AAAACATGAG GACAGTTTAT 120  
 CCATTGGATG CCATCTATNT AGTCCCAATT AAGAAAAGTG TTTTTTGTG AGAATGACCA 180  
 AGGTAAATTT AAATATACCA TTCAAACAN 209

SEQ ID NO:4003

SEQUENCE LENGTH:208

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04730

## SEQUENCE DESCRIPTION:

GATCGATGAA GCACTTTTT ATTAATATTT TCCTTTGTTA AAGGAGGAAC CGTAACTCTC 60  
 CATAGCTGTA CATATAACCC TTTTCTCCTA AAGAGGAGTC AGTCAGTGCT CCTATATTTT 120  
 TCATTTTTTG TCAAAGCAAG AAGTAAATAC TTTAGAATTG TTAATATAT AAATAAAGCA 180  
 AATAAAGTTG AGTGTTCAC ATGGTAAA 208

SEQ ID NO:4004

SEQUENCE LENGTH:207

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04732

## SEQUENCE DESCRIPTION:

GATCTTTCCA CATACACTAC ATTGTATTGT TCAAAATTCA TAGAAATNAC TTGCAATATA 60  
 TTGATTTAAG CCTTATGTAG TGACTGTTGC TATATTAAA GTAGCATTTT NAGTTTGCTG 120  
 TTTTCTCTCA CTGCTTAATC CTACAAAAAC CAGCCATCTG CCTAAAAAAT AAAAGAGCAA 180  
 AANTGNATCA GTGCAACCGG TATACGN 207

SEQ ID NO:4005

SEQUENCE LENGTH:207

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04733

## SEQUENCE DESCRIPTION:

GATCCACATC TCAAAGAAGT GGGACTTCAC CAAGGTNCAA TGCTGATGAA TTTGAACNCA 60  
 TGGTGGCTGA AAAGGGGCTC ATCCCANGAT GGCTGTGGGG CAAGTCATCC CAGTCGTGGC 120  
 CTATGGCAAG TNNNGGCCCT NACTCATGAG GGCTTCAATG TGCTGCCCCC TCTTAATACT 180  
 CACCAATAAA TTCTACTTCT GTCCAAA 207

SEQ ID NO:4006

SEQUENCE LENGTH:205

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04734

## SEQUENCE DESCRIPTION:

5 GATCTACATT ATTCAGCAGC CTCGAAAATG TTAAGCCTGG ATTTAAAACA CAGCCGTCTG 60  
 GCCAGCTGCC TCGAATATCT GACAGCTTAG CAAAAAGGGC CANAGCTTTC CATAGGCGTG 120  
 CTGCACTTGC TTGGTAAATT AAGCAGCTTT TGTATCTTCC CCTTTGACTT TAGGTAATAA 180  
 AGCATCCAAA CTTGTAAATC TGAAA 205

10 SEQ ID NO:4007  
 SEQUENCE LENGTH:204  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04735  
 SEQUENCE DESCRIPTION:  
 15 GATCTGGGAT AAAACCAGAC TGAAAGGAAT ACCTCAGAAG AGATGCTTCA TTGAGTGTTT 60  
 ATTAACCAC ACATGTATTT TGTATTTATT TTACATTAA ATTCCCACAG CAAATAGAAA 120  
 ATAATTTATC ATACTGTAC AATTAAGTGA AGAATTGATA ATAACTGAAT GTGAAACATC 180  
 AATAAGACC ACTTAATGCA CAAA 204

20 SEQ ID NO:4008  
 SEQUENCE LENGTH:203  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 25 CLONE:HUMGS04736  
 SEQUENCE DESCRIPTION:  
 GATCTNCTTT TTATCACTAT AGTTTGATT CCTAGAATTG TATATAAATG GAATCCAACG 60  
 GGCACAGTGA CACATGCCTG TAGTCCAGC TACTTGAGAG GCTGAGGTGG GAGGATTCCT 120  
 TCAGCCCACT TCAAGGCTGC AATGAGCTAT GACCACGCCT ATGCACTNCA GCCTGGGCAA 180  
 30 TATAACAAGA CCCTATATCT AAA 203

35 SEQ ID NO:4009  
 SEQUENCE LENGTH:202  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04737  
 SEQUENCE DESCRIPTION:  
 40 GATCTGAAAA GAATTTNTAT TTAAATTGGG TTGAGGGAGA GTAGATACAA TGAAACCTTA 60  
 AATTTAGCT TTNATTCTAA ACCCTTAAAT TTTTATGGG TTATGTTTAA CTTGGCAAAA 120  
 CTATCTGTGT TTCTNTCTTA GTGATATAGC ACCCTTAAAG TAACTTGAGT GGTAAGGAA 180  
 ATAAAAATACA CCAGTTTCA AA 202

45 SEQ ID NO:4010  
 SEQUENCE LENGTH:201  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 50 CLONE:HUMGS04738  
 SEQUENCE DESCRIPTION:  
 GATCCTCTTC CTGCTCCAGT TGCTGGCCGA CCACGTCCTT GCGTTGGCC TGGTCACAAG 60

55

GCCGCTCATG GATTACTTGC CCACCTGGCA GAAAATCTAC TTCTACAGTT GGGGCTGACA 120  
 GACCTCCCGG AAGGAGGGTG TGGGGAGGGG TGGGGCAGGG AGCCCCCTCTT CCCTAATAAA 180  
 ACTGACTCCG GCAGCGTCAA A 201

5

SEQ ID NO:4011  
 SEQUENCE LENGTH:201  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04739

10

SEQUENCE DESCRIPTION:  
 GATCCTATTT GTACAAAAAA ATGTAAACT TAAAATTGCA CAAAATTTGT NACCTGTACC 60  
 AGCTTTTAGA ACTGTTTATC TTATCCTCCT CAGTGATACA TCATGAAGTT GTGTGCTTTG 120  
 CCTAAATGC CCAGTTACCT GAAATTGTAT AAATNCTTGC CAAAAGTGTT TGAACCTAAT 180  
 ACAAACCTCC CATCTCTAA A 201

15

SEQ ID NO:4012  
 SEQUENCE LENGTH:201  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04740

20

SEQUENCE DESCRIPTION:  
 GATCTCATTT TATTAGCAT CAGCTCAAGA AACTNAAGTC TTAGTGACA GTATCACAAC 60  
 AAAGAAAAAG CTTTGT TTTT ATAAGTGGTA AAAACAAGAA AAGATTCTCA TCAAAATGAA 120  
 AATATAAAAT TAATCATTTT TCACCAAAGA GTATGCCTGG GAGCCTCCAG CTGTAAAAAG 180  
 NCAATGCTAT TACTACTTCT N 201

30

SEQ ID NO:4013  
 SEQUENCE LENGTH:200  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04741

35

SEQUENCE DESCRIPTION:  
 GATCCAAGTT GCCCTTGGGG TATAAACTT GACAGCAGAG GGCCTTCAGG GTCCTCAGC 60  
 TGCAGTGTGA AGTGGGACAC ACAGGTGAGA CTCCATCTGC CCTGGGCAGG TTCCTGAGCC 120  
 TTNGGGGACC AGTTCACCCT ACATCCCAGG CTTCTGTTGT CCCTTGCCTG CCTGTAAGGA 180  
 ATAAAGTTGC TTTGCTTAAA 200

40

SEQ ID NO:4014  
 SEQUENCE LENGTH:200  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04742

45

SEQUENCE DESCRIPTION:  
 GATCTGACCT TTTCTCAGA TACATAAGCA TTATTTTCTC TGTTTAGGTC CAAGGAAAAA 60  
 CAAAAGGTAA AGGNAATAAA GGAATATAC ATAAGGCAAA CATTTCTCTT TTTTTTTTGC 120

50

55

ATTATATCTT ACCAATTAAT TAAATTGTGG CCTTTGTTAT TATAAATGTA ATGATTCATT 180  
AAACTATATT ATGTAATAAA 200

5 SEQ ID NO:4015  
SEQUENCE LENGTH:200  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
10 CLONE:HUMGS04743

SEQUENCE DESCRIPTION:  
GATCCTATGA CTGACATCAA CTAAAATTTA AAAGAAGAGG AAGACTCAGT TGGGAAATTT 60  
TNCCATGAGG AAAATGTGCT TTGGTGCAAG GTACAAGGCC CACACCCTCT CTGAGAGATA 120  
CTATGATTAA AAAAGCTTTA TATCTTGGGA TTTTNCACAA CTGATAATGT GCAAAGNTAT 180  
15 AACNGATTA ACTTGTCAAA 200

SEQ ID NO:4016  
SEQUENCE LENGTH:200  
20 SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS04744

SEQUENCE DESCRIPTION:  
GATCTTTCAA GAATGAACCA AGGNTTTTAA AAAGAATTAT AGGAAACACT TCATTCTTTA 60  
25 TAAAACTTTC TATAATGCCT TATTGGAATG TTAATCTTAT GTGCTTTCTA AAAAATGTTG 120  
TGAAATACCA AACTTATGGA TTATCACTAG GTTATCAAGC ATATATNAGT CTTTATCAGA 180  
NTAAAATGAA ATTNCATAAA 200

30 SEQ ID NO:4017  
SEQUENCE LENGTH:199  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS04745

SEQUENCE DESCRIPTION:  
GATCTGAGAG GCAGTAAAGC AGTGATGAAG ACAGTGCAGC AGAACATTGA AGTCCTGATT 60  
GCAGCAGTGA CTCTGCAACC TTGGATAAAT TATTTCANTC TTTATTTTGT AAAACGGAGA 120  
TAACGGCCTA TAGGATTNTN AAGACTGANT ATTTTAAAAG NGCTTAGAAT GGTGCCTGAC 180  
40 AAATGAGNNN CANTAAATN 199

SEQ ID NO:4018  
SEQUENCE LENGTH:199  
45 SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS04746

SEQUENCE DESCRIPTION:  
GATCATGTGA TTTCTATTTC TNCCCCACAG GGTAAGGGAC GAGTCTTCTG GAAGGCTCTG 60  
50 CCATGGACAT TTGTCTCGG GCTCAGAGGC CCCACCCTGC CCCACACCTG CCCCTAATCA 120  
CTGCAGTGC CAGCCCATG TTGAACAGAT TGTAGCGTTC TGTCTCATTG CGAGCAAATA 180

55



AATAGACTTT CATTGGAAA

199

SEQ ID NO:4019

SEQUENCE LENGTH:198

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04747

SEQUENCE DESCRIPTION:

10

GATCACGCGG CATGTATTGA GGTGTGGCAT GCAGCATTTT GGAAGGAAAA TTGAAGACGT 60  
 GTTCAAGAAA ACATGAACAG AAGCAAATNA TGAAAATGAG CATTTTACTT GATGTTGATA 120  
 ACATCACAAT AAATTATGGA GAAAAATACA TATTGGCTA ACTTTTAATT GCTGANCAAT 180  
 AAAAGTGTTC CTTTAAA 198

15

SEQ ID NO:4020

SEQUENCE LENGTH:196

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04748

SEQUENCE DESCRIPTION:

20

25

GATCCCTACC GCCAGCTGCG AGAGAAGGAC CCCAAGTACA GTGCTCTCCG CCAGAATTC 60  
 TTCCGCTACC ATGGGCTGTC CTCTCTTTC AATCTGGGCT GCGTCCTGAG CAATGGGCTC 120  
 TGTCTCNCTG GCCTTGCCCT GGAAATAAGG AGCCTCTAGC ATGGGCCCTG CATGCTAATA 180  
 AATGCTTCTT CAGAAA 196

SEQ ID NO:4021

SEQUENCE LENGTH:196

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04750

SEQUENCE DESCRIPTION:

30

35

GATCATGAAG AAGCAGGGCC TCTACCTACA AAAGTNAATC TTGCTCATTG TGAAATTTAA 60  
 GCATTTTCT TTTAAAGAC AAGTGAATA GACATCTAAA ATTCCACTCC TCATAGAGCT 120  
 TTTAAATGG TTTATTGGA TATAGGCCTT AAGAAATCAC TATAAAATGC AAATAAAGTT 180  
 ACTCAAATCT GTGAAA 196

40

SEQ ID NO:4022

SEQUENCE LENGTH:195

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04751

SEQUENCE DESCRIPTION:

45

50

GATCTGGTTC CAGGGGAAAA AAATAGCTGG TTGGTGTCTA GCCCCCAAC ACTTTTGTCT 60  
 GTTGTGTATA AAAGAAGAAA GACTGGCATG TACCTTCATT TGCTTAGCTA TTTGAGTATC 120  
 TAGAGAAAAA TTTAAATGCA ATGAGTTAGC AGTATACCCT GGCACACTTA ATAAATTAAA 180  
 CATTTGTGGA GCAA 195

55

SEQ ID NO:4023

SEQUENCE LENGTH:194

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04752

SEQUENCE DESCRIPTION:

GATCTAGAAG CTGGTAAAAA TGACAATATC AATCACATTA GGGGAACCAT TGTGTCTTC 60  
 ACTTAATCCA TTTAGCACTA TTTAAAATAA GCACACCAAG TTATATGACT AATATACTT 120  
 GAAAAATTTT TATACTGAGG GGTGGTGAT AACTCTTGAG GATGTAATGC ATTANTAAAA 180  
 ATCAACTCAT CAAA 194

SEQ ID NO:4024

SEQUENCE LENGTH:193

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04753

SEQUENCE DESCRIPTION:

GATCCAACAG CAACACCATT TTTAAATTAT TGTGAAAAGA TTAAGTGGCA ATGTACAGAG 60  
 TTTACTCAA GCCCTTCTTA AGGGAAAACA CTACAAAAAG TCACAAGGAT ACCAAATGGA 120  
 AACACATGAT GATGCCTCTG GGTCTGTATG AGACCGTGAT GAAGTAGAAA TAAAGCCCTT 180  
 CTGAGATGGC AAA 193

SEQ ID NO:4025

SEQUENCE LENGTH:191

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04754

SEQUENCE DESCRIPTION:

GATCCACGGT GGGCTCCAGC TGCCAAGNCA CCCAAGGGAG TCTGGGCCCT AGGCCTAGCC 60  
 CCATCCCTCC CCATGAGGGG CCAAGACACT GCCTAAGGTG TGGGAGGGAC TGGCTGAGAT 120  
 TGCAGCCCAT GGTAGGAGCT GGACCAACTG TATATAGTTT TCAATAAACT TTTTCCTTTT 180  
 CTGTTCTCAA A 191

SEQ ID NO:4026

SEQUENCE LENGTH:264

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04755

SEQUENCE DESCRIPTION:

GATCCAGGAA GTTGGTGAAC CATCTAAAGA AGAGAAGGCT GTGGCCAAGT ATCTTCGATT 60  
 CAACTGTCCA ACAAAGTCCA CCAATATNAT GGGTCACCGG GTTGATTATT TNATTGCTTC 120  
 AAAAGCAGTG GACTGTCTNT TGGATTCAAA GTGGGCAAAG GCCAAGAAAG GNGAGGAAGC 180  
 TTTATTTACA NCCAGGGAGT CTNTGGTTGA CTAAGCAAC CAGGCTTTTA AAGTAGCAGT 240  
 TTNTTTCACC GAGCCCTAAA GGTN 264

EP 0 679 716 A1

SEQ ID NO:4027

SEQUENCE LENGTH:186

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04756

SEQUENCE DESCRIPTION:

GATCTTCACA TATTTTATAT GNATATATAT ATCAAGAAGT TATATATATA TAACTCAAGA 60  
AACTCAAGTT ATATATATAT GTCAAGAAAT GTATGATTAT TTTGGAGAGA ATGGGCCCAA 120  
ATGTGAAAAA GATATAAAAA AAACAAAAAA AACNNAAAAA AAACCNCNTT TTNCCCCTNC 180  
GNANTN 186

SEQ ID NO:4028

SEQUENCE LENGTH:150

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04757

SEQUENCE DESCRIPTION:

GATCTGGAAG TCACCTCCT CTGGCCCACG GAAAATTTTG GTAATCTTCT AGGTTCTAAA 60  
ATGAAGATGT ATGGGTACTC TGGCAGACTG CATGTTGTAT AATTGAAAA ATACTAAAAG 120  
TGGAAAAATAA AATTGAATTA AACTTTGAAA 150

SEQ ID NO:4029

SEQUENCE LENGTH:186

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04758

SEQUENCE DESCRIPTION:

GATCAACAAG TTCAAAACAC TGCTAAGTCT AAATCTAAAA CAGACCAAGA GTACCTTCAT 60  
TTAANTTTAG CTGACACAGA GCTTGATGCC TATCCTNCAT TCTTNCAGA AGTAAAGATA 120  
ATTATGGCAC TTATGCCAAA NITCATTATT TAATAANGTT TTAATTGAGG TAACATTACT 180  
GATTN 186

SEQ ID NO:4030

SEQUENCE LENGTH:183

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04759

SEQUENCE DESCRIPTION:

GATCCAACAC AGAGACAATA GAAACATTGG GATTGAAGAG ATTCTTGGA CTGTAAAAAT 60  
CCCAAGAATA TGGGATTGTA AAAACCTGT CATCTTACTG CTATGATAGA TGAAGATTTT 120  
GCTTGCTAT ACCTTGNGC TATCCTCTC TTCCTTCCT CCAAATATAC TTGTAGGTAT 180  
AAA 183

SEQ ID NO:4031

SEQUENCE LENGTH:183

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

5 CLONE:HUMGS04760

SEQUENCE DESCRIPTION:

GATCTAGCAT TTTAATTCT AGCATTGCTA TTCACCGGCT TCCTTATTTT ATATGTAAAA 60  
 ATTAAGATTT TATATTTAAT CTTCTTGTTT CTCATAGATA TTTTGTGAGC ATTTTNTTGT 120  
 10 TTATTTTGAA GAAATGTGGA TAAGATACTT GGTAGTATAA AACAGNCTCT CTGAGAGTAT 180  
 TTN 183

SEQ ID NO:4032

SEQUENCE LENGTH:182

15 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04761

SEQUENCE DESCRIPTION:

GATCAAGGTC TGTATATTAT CCCAACTTT ATTAAGAATT GTTTCTAAT TNGITATAAC 60  
 ATTTTNAAT TAATAGTTTC AAAACAAATT GTTAATACAA CTGTATAAAA TGAACATAAT 120  
 20 TTTCCTCACT TGTATTTTGG TTATTGAGCA AGTTTATCAA AATAAATNGT CTAATAAAGA 180  
 AA 182

25 SEQ ID NO:4033

SEQUENCE LENGTH:181

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

30 CLONE:HUMGS04762

SEQUENCE DESCRIPTION:

GATCTCTTAT CAATTAGCAC TCACTAATGT ACTACTAATT GAGCAACCTA CGCACTCAGT 60  
 TGACTACGTA AATCTGTCTAG GTCTTTTGTG ATTCCTCTG ATGCAGGAGA GGAAAAATTG 120  
 35 TAATTGATGA AAATAATGAA TGAAAAACAA CAGATGAATA AATGGTTCTT TATAAGTGAA 180  
 A 181

SEQ ID NO:4034

SEQUENCE LENGTH:180

40 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04763

SEQUENCE DESCRIPTION:

GATCTGGAGT CCCACGTTCC CCAAGGCCAG CGGGATGTGT GCCCCTCCTC CTCCTCACTC 60  
 ATCTTTCAGG AACACGAGGA TTCTTGCTTT CTGGAAAAGT GTCCCAGCTT AGGGATAAGT 120  
 45 GTCTAGCACA GAATGGGGCA CACATTAGGT GCTTAATAAA TGCTGGATGG ATGCAGGAAA 180

50 SEQ ID NO:4035

SEQUENCE LENGTH:180

SEQUENCE TYPE:nucleic acid

55

TOPOLOGY:linear

CLONE:HUMGS04764

SEQUENCE DESCRIPTION:

5 GATCCTGTTT GTACAAAGTC TTGCTTTTAT AAGGTTTCAA TAATATCTAA AACAACACAT 60  
 TAAAAAGCTG AGACCATTTT ATGAAGATAA TTGTTTGTA TCATAGGTGT TGAAAGTAAA 120  
 AAGGTGCCAT CTTGTGGTAT TGACTTGTAT TTATAACAAA TAAACTGCTC AAGAGACAAA 180

10 SEQ ID NO:4036

SEQUENCE LENGTH:180

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04765

15 SEQUENCE DESCRIPTION:

GATCCTGGTT ACAGCCATTT TGTGTGATTC ACTTCGGGGG TTAAGTAATG CAGGATTCTG 60  
 CAAACAAGGT GTCGCCGTCC AAATGTACTG TCCTGGCATA GAGAGCACTG CTTTGTTTC 120  
 CACTGTTGTA GAGAAACTA GGGAGAACTT TATTTTCAA TAAACTTTTC TTGTGTGAAA 180

20

SEQ ID NO:4037

SEQUENCE LENGTH:178

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

25

CLONE:HUMGS04766

SEQUENCE DESCRIPTION:

GATCATGTAT AAAAAGAAAA AAAAGAAGTC ATGCTNTGTG GCCAATTATA ATTNTTNCA 60  
 AAGACTTTGT CACAAAACAGT TCTATATTAG ACATTTTGGA GGGACCAGGA AATGTAAGAC 120  
 ACCAAATCCT CCATCTNTNC AGTGTGCCTG ATGTCACCTN ATGATTGCT GTTACTNN 178

30

SEQ ID NO:4038

SEQUENCE LENGTH:177

SEQUENCE TYPE:nucleic acid

35

TOPOLOGY:linear

CLONE:HUMGS04767

SEQUENCE DESCRIPTION:

GATCAGGATT TGGGAAAATT GTGGTCAATA TTTGATTTTC CTTTCTGTT TGATAGCCTT 60  
 ATCTAAATTC CCTAGCTTG AATGTAGTAA ATATGAGTGT GTAAAAATGT GTATCTAATT 120  
 CACCTCTTNG GGGAGGTTTA ATGTAACAT AAATAAAAT TCTTCCCA GGTAAA 177

40

SEQ ID NO:4039

SEQUENCE LENGTH:175

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04768

SEQUENCE DESCRIPTION:

50 GATCTTACCT CCTAACCAAC TCCATACATC ATGACCAATG GCTCAGTCCA AGCNGTCATC 60  
 TCTTGCTTGG TCACTGCAGG TACTTGCTAA CTTTCTTCCC AATAATCCAA CCCCACAGA 120

55

GCAGCCAGAG TAGCCTTTTT TTGTTTGTGTT TTGTTTGTGTT TTGTTTGTGTT TTGTN 175

SEQ ID NO:4040

SEQUENCE LENGTH:175

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04769

SEQUENCE DESCRIPTION:

GATCTTAATA GCTAAAATAT GAAAAATATT TGGNAAGTCT GAAATNAGGT CTCCTGGCCC 60  
TGGTGTGCCC TTAATGCCCTG TNACAGTTGG CCTCTGTGAA TATTGGTATA ATTNTAAATA 120  
ATGTCAAACT CCATTTTNTA GCAAGTATTA ATAATTAAGG GAAGTATGTC TGAAA 175

SEQ ID NO:4041

SEQUENCE LENGTH:174

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04770

SEQUENCE DESCRIPTION:

GATCCTCAGG ATATGCAGGG CTCAAGAGAA ATGAAATATC TTGGGGATAT GGTACTTAA 60  
GACGTGATAC TGTACAGTG AATTCACAG AAGATGGTGC TGCCCTAACT GAGGTTCAAT 120  
CCATGTATAA GCCAGACCAA TCTGAAGACA AATAAAGTAT TTCACAGCCA CAAA 174

SEQ ID NO:4042

SEQUENCE LENGTH:171

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04771

SEQUENCE DESCRIPTION:

GATCTTCAA CATTAACTTA AGCAGACCAA AAATTCTGAT GACCGCATCT AGATTATTTT 60  
TTTATAAAA TGATTTTCAC TATAGCTATG TTACGCTAAG CTA CTGTCCA ATCTCTTG 120  
ATGTGTA ACT TTTACATGTG AATATTAAAG TAGATTTCTC TGTCTTGTA A 171

SEQ ID NO:4043

SEQUENCE LENGTH:170

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04772

SEQUENCE DESCRIPTION:

GATCTTTAAA GATGTGCTAA ATGACTTTTT TGGCCAAAGG CTTAGTTGTG AAAAATATAA 60  
TTTTTAAATT ATACATTCAA GGTAGTGGCC AAATGTAACA CATCAATCAT GGAATGATTN 120  
CTCTGCTAAC AGCCGNC TGT ATGTTTCAAT NAATTTGTCC AAAGCTCAAA 170

SEQ ID NO:4044

SEQUENCE LENGTH:169

SEQUENCE TYPE:nucleic acid

EP 0 679 716 A1

TOPOLOGY:linear

CLONE:HUMGS04773

SEQUENCE DESCRIPTION:

5 GATCCTTCCC AGTGGACAGA TGAAGAATTA GGTATCCCTC CTGATGATGA AGACTGAAGN 60  
TGTAGACTCA GCCTCACTCT GTACAAGAGC CAGGTGAGAA TTTCAAGGAT TATCGACTTC 120  
ATATTGCACA TTAAAGTTAC AAATTAAAGT GGCTTGGTCA AGAATGAAA 169

10 SEQ ID NO:4045

SEQUENCE LENGTH:169

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04774

15 SEQUENCE DESCRIPTION:  
GATCTAGTGT GTAGTGAGCT CAGTATAGAG GACAGAGCTT TCATCATGTA AATTNATATG 60  
CAAAGCCAAA TNAACGTGG TGTGTACTTC TACTGATGC GTCAGGGTAT AGGCCTCTTT 120  
TTCTGCCATT CAAATAATGG AAGTTAATTA AATTTTAAAC AAATGTAAA 169

20 SEQ ID NO:4046

SEQUENCE LENGTH:169

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

25 CLONE:HUMGS04775  
SEQUENCE DESCRIPTION:  
GATCCATACT GAAAAAATNC TGAGCCAGCC ATCTTTGGCA AAGNNCCCTG AGCTCTTGCT 60  
ATCTCTCAAG AGTGCTGAGA NCCACGGTGA AAGTNGTCT CTAGGCCAC AAGTGTAAC 120  
30 ATGCTGTAA CAGCTGTCAA TAGATAATTA AAATTCATAC TGTATGAAA 169

SEQ ID NO:4047

SEQUENCE LENGTH:168

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04776

SEQUENCE DESCRIPTION:

35 GATCTCTGTT CTNGNTTGAA TGTATTTAAT TTCCAGCAGA ATGAGCCCCA TTCCTTATTT 60  
40 TGATTGGCCA TTTATCATGT ACATATGGTG AAATGCCTAT TCGTGACTTA GCCAATGTTG 120  
TTTCTTTTTC TTACTGATTA CTACAGTACA TTTTATATG AAAGCAAA 168

SEQ ID NO:4048

SEQUENCE LENGTH:212

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04777

SEQUENCE DESCRIPTION:

50 GATCTGCTGA AGCATCTGTC CAGCTGGTAT CCTGTGAAAG TTTGTAATTT NCTGAGTAGA 60  
CATTCTTATA GAGTATTGTC TTAAAAATCA GATTGTCTCT NCTATATTGA AAGCATTNN 120

ATGTTTNCNA ATTTAAAAAT TAATATTTCC TTATAGATAT TGTGCAATAA AGCTGAAGTA 180  
GAATGTGTGG TTTTGGCAA TNCTTTAGCG GN 212

5 SEQ ID NO:4049

SEQUENCE LENGTH:167

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

10 CLONE:HUMGS04778

SEQUENCE DESCRIPTION:

GATCTTGTCT CACAAAATAA ATTAAGAAGA TTTTAAATA GCAGGTTTCT AAAACAATGA 60

GAAAGACAGC ATTACATATC AGTGTCTACA ATTTAAACAA AGCTATACTT AGAAGTAAAT 120

15 TCATTGTCTT AACTGCTTTT GTTCCAATAA AACAAAATAG CAGGAAA 167

SEQ ID NO:4050

SEQUENCE LENGTH:176

SEQUENCE TYPE:nucleic acid

20 TOPOLOGY:linear

CLONE:HUMGS04779

SEQUENCE DESCRIPTION:

GATCGTTACT ATGTGTCAAA GGGTTTGGAG AACATTGATT AAGGAAGCAT NTTCTTGATT 60

25 GATGAAAAAA ATAACTCAGT TATGGCCATC TACCCCTGCT AGAAGGTTAC AGTGTATTAT 120

GTAGCATGCA ATGTGTTATG TAGTGCTTAA TAAAAATAAA ATGAAAAAAA TGCAAA 176

SEQ ID NO:4051

SEQUENCE LENGTH:166

30 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04780

SEQUENCE DESCRIPTION:

35 GATCTATAAC TGACTTTGC CTGGCGCTGT GCGAAGGTCA GAAAACTTAC TGCTAGTACC 60

TAGAAACACA CAAGGCTGCC CAGCCAAATC TTAATGTAAA GTAGCTAGAG CCATGGAAGT 120

ACAGTATGAA TAAAAAGAA AAANGTATTG ANCTTCAAT TCTAAA 166

SEQ ID NO:4052

40 SEQUENCE LENGTH:163

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04781

45 SEQUENCE DESCRIPTION:

GATCTTGTA GTAGGAAAGC TGTAATAA AATTGTATTG TTGCTTATT AGCCATGTAT 60

CTCTTAAAT TTTGTTATGT TTACAACGAT GTACCTTATT GGCAACAAGT TATTAGTTTG 120

ATGTTTAA CAATAGTGCCT TAGTAAATNA TTTTACAAC AAA 163

50 SEQ ID NO:4053

SEQUENCE LENGTH:162



SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04782

5

SEQUENCE DESCRIPTION:

GATCCAAAAG CTGGCTNTCT AACCACCAGC CAAGGGCTCT CTTACCACC AAGCCAACTC 60

TCAGGGCAGC AGCAATGTGT ACCTTATTAA CCTCTGCACC CNAGGTCCTA GCACAGGGCT 120

NGTCCATAAC AGGCGNCCAA TAAACATGTG TCATAATCTA AA 162

10

SEQ ID NO:4054

SEQUENCE LENGTH:161

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

15

CLONE:HUMGS04783

SEQUENCE DESCRIPTION:

GATCCCTGGT CCTGCCGACA CGCAGCTACT GAGAAGACCA AAAGAGGTGT GTGTNTGTCT 60

ATGTGTGTGT TTCAGCACTT TGTAATAGC AAGAAGCTGT ACAGATTCTA GTTAATGTTG 120

20

TGAATAACAT CAATTAATGT AACTAGTTAA TTACTATGAA A 161

SEQ ID NO:4055

SEQUENCE LENGTH:159

SEQUENCE TYPE:nucleic acid

25

TOPOLOGY:linear

CLONE:HUMGS04784

SEQUENCE DESCRIPTION:

GATCGGCACC ACACCAGACA TAATCCTGGA CGACTTGCTG GAGACGGACC GCGTCACCGC 60

30

CCACTTCTAG CCCCGTGGAT GCCGTCACCA CCAGCACACG GAACTACCTC CCACCCCTT 120

TTTGTACAAA ACACAAGGAA AAACATTTT TGCTTGAAA 159

SEQ ID NO:4056

SEQUENCE LENGTH:159

SEQUENCE TYPE:nucleic acid

35

TOPOLOGY:linear

CLONE:HUMGS04785

SEQUENCE DESCRIPTION:

40

GATCTAATTC TTTTGATAAA GTTCTAGCTC TAAAAGTGAT AGTGGGACTG TATGTTTTCT 60

GATACTGGTG GCTTATGTTA TTAANCCTTT TTTAAAAAAG GTCCACTCTA AAGGCTGANN 120

NCCACCCTAN GTTCCAGCC TCCTGGCCTC NACCNGGNN 159

SEQ ID NO:4057

SEQUENCE LENGTH:158

SEQUENCE TYPE:nucleic acid

45

TOPOLOGY:linear

CLONE:HUMGS04786

50

SEQUENCE DESCRIPTION:

GATCTTGTGT TCTTTGTGCC AATATGAAAA GGAGAGGGTT GGTTCCTTCC TTTATTGTTG 60

55

AATGCTCCCA TTAAATGCTT TATGGCTTTT ACTGTATTAC TTTTITAGAC TCCCGTCTGC 120  
ACAAAATGCA ATAAAAATAA TTTTATTATA CCCTTAAA 158

5 SEQ ID NO:4058  
SEQUENCE LENGTH:158  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
10 CLONE:HUMGS04787  
SEQUENCE DESCRIPTION:  
GATCACAATG GGGAAAAGTG ACAGAACCAG ATTTCAAATC CCAGTCTTTC TGCTTCTAGA 60  
GATTGAACTA CTAACATCTG CATTATATAA AATTAAGTNT CTCAAGGTAG TTTGTGAACG 120  
TAACATACAA ATAAGTGATT AAAATTTTNG GTGATAAA 158

15 SEQ ID NO:4059  
SEQUENCE LENGTH:308  
SEQUENCE TYPE:nucleic acid  
20 TOPOLOGY:linear  
CLONE:HUMGS04788  
SEQUENCE DESCRIPTION:  
GATCCCAAGT GATTAAAATA GGGTTTCTGA ATGGATGTTG AATGGCGTGG ACTCGCTACT 60  
CCGTTCTTCA CAGCTGCCTT CCAGAATGTG TTCAAAGAG AGACAAGAAG GAGTGTATGG 120  
25 CTTATAAAGT GAATCTAATA CAGTATTTGT TGCATTAAA CAACTAGAC ATTTTCTTAC 180  
GGAAAANTTA TGAATACAG CATATTTNAT GTNCTCCCAT TGACTCAATC ATGACAATAT 240  
TTCTGCTTTA ACACCATCTT TCATGATTAG NAATGTTTGT NATTGGAAT GTTACACCAT 300  
GTAAATAN 308

30 SEQ ID NO:4060  
SEQUENCE LENGTH:155  
SEQUENCE TYPE:nucleic acid  
35 TOPOLOGY:linear  
CLONE:HUMGS04789  
SEQUENCE DESCRIPTION:  
GATCAGCCCC AGATTGACG TGCATCAAA GACCTGAAA AATGGCAGAA TAATCTGCTT 60  
CCATCCCGCC AGTTTGGTTT CATTGTACCT GACCACCCTC ACNGGCAANC ATGGACCCAT 120  
40 GAAGNAGCAA NNCGGAAACN CACNAGAGGG AAAAN 155

45 SEQ ID NO:4061  
SEQUENCE LENGTH:155  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS04790  
SEQUENCE DESCRIPTION:  
GATCTCATTG GTATGTTTTT TAATGTGTAG AATTAACACT TAAAAATAAA CAGGTGTGAA 60  
50 AATTATAAAG GAATATATAT GACAATTATT TNCTGTACAT TAATGTCTAA ACATTATACT 120  
TACTTTTCCA TAATAAAGGA AATTTTGAA CCAA 155

55

SEQ ID NO:4062

SEQUENCE LENGTH:155

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04791

SEQUENCE DESCRIPTION:

GATCTTAAAA CCCAAGACAT TATATTTGAA GGGGCACAGC AAACAGTGCA AGAAAATCTG 60  
 CTGATGGAAG ATNATTTTNA TCAGTCCTCA GANCCAGAAA CTATAAACT GGAAGGAAA 120  
 GTTAAATAA AGANTTTATT TCCAAATTCA GCAA 155

SEQ ID NO:4063

SEQUENCE LENGTH:153

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04792

SEQUENCE DESCRIPTION:

GATCTAAGNA GGATTCAACA CCTTTNTTG GTTGCTCAGT GTGTAATGAC TGAGATTTGT 60  
 AAATCTTGT GAACATTCTG TACTGGTTCC CAAGAGCTAT TCATTCCTG CTACCTGATT 120  
 TCAGCACAAT AAATATACTT CTGCTGTGGG AAA 153

SEQ ID NO:4064

SEQUENCE LENGTH:152

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04793

SEQUENCE DESCRIPTION:

GATCTTAGCT GTATGGAGTA ACTATTTTCTAG AAAACCTAT AAGAAGTTCA TTTTCTTTCA 60  
 AAAAGTAACAG TATATTATTT GTACAGTGTA GTATACAAAC CATTATGATT TATGCTACTT 120  
 AAAAATATTA AAATAGAGTG GTCTGTGTGA AA 152

SEQ ID NO:4065

SEQUENCE LENGTH:149

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04794

SEQUENCE DESCRIPTION:

GATCAGAGAA GGCTGAAGAA GGTGGAGAAA CTNAGGCACA AAAAGAGGGC AGTGAAGATG 60  
 CGGGCAACCT CCCTGAAGCC CAGGAGAAGA ATGAAGAAGA AGGAGAGACA GCCACAGAAG 120  
 AGACGGAAGA AATAGCCATG GAGGGTGCN 149

SEQ ID NO:4066

SEQUENCE LENGTH:149

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04795

SEQUENCE DESCRIPTION:

5 GATCAACTAT GGGTTTATAT AAATNCCAAA TTTAGTACAA CAAATTTAGG TCATCAGGTG 60  
 AATACAAGTA TTTTNTTAA CAGGNAACAT TTTATTATAN NAAAAATATT AATGATAAAC 120  
 GCATATTGGT TGAAAAATAT TTTTAAACN 149

SEQ ID NO:4067

10 SEQUENCE LENGTH:148

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04796

SEQUENCE DESCRIPTION:

15 GATCTCTGTG ACCCATACCC TATTNTACA CTCCTCCCC TTTGAAAAT CACTAATAAA 60  
 AAATTTNCTG GTTTATGGC TCAGGGGGCA TCACAGAACC TGCCAACATG TGATGTCTGC 120  
 CCTGGACACC CAGCTTTAAA ATTTCAAA 148

20 SEQ ID NO:4068

SEQUENCE LENGTH:147

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04797

SEQUENCE DESCRIPTION:

25 GATCATTTTC TTGGGACCTT GAACTGTGAA TGTTTGTCC TAACCATTTA ATATTTTCTA 60  
 GGTACTTGCT GCAAGTNCTT GAACTATTTT ACCAGCTTTA ACTTTGGGGC TCTTAGNTTC 120  
 TNTNCTCCAG ATTCTTGTTA TNNNATN 147

30 SEQ ID NO:4069

SEQUENCE LENGTH:148

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04798

SEQUENCE DESCRIPTION:

35 GATCAGAGAA GCAGATATTG ATTGAGACGG ACAAGTCAAC TATGAAGAAT TCGNACAGAT 60  
 GATGACTGCA AAATGGAAGA CCTACTTTCA ACTCCTTTT CCCCCCTCTA GAAGAATCAA 120  
 ATTGAATCTT TTACTNACCT CTTGCAAA 148

40 SEQ ID NO:4070

SEQUENCE LENGTH:149

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04799

SEQUENCE DESCRIPTION:

45 GATCTTTTAC AACTGTGTA CCTGAGAGA GGAGGGAGGA GGGAACTGG CGGGGGTGTG 60  
 TGAGGCCGCA CTGTCAGCTG GCCGGTCCAA GCCTGTGGCT GGAGCTGGGG TCTGTTTACC 120  
 TAATAAAGTC CCACAGGTGC CTCATTAA 149

55

SEQ ID NO:4071

SEQUENCE LENGTH:146

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04800

SEQUENCE DESCRIPTION:

GATCCCCTTC AAGTCTCTCT GACCTTTCTT CTGCCCTCCA GCCTGGGTGA CAGAGCTAGA 60  
 GTCTGTCTCA AATAATAATA ATAATACAAT AAATAAATAA ATAAATAAAT AAATAAATAA 120  
 ATAAATAAAG TACGCTTTCC ATTAAA 146

SEQ ID NO:4072

SEQUENCE LENGTH:146

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04801

SEQUENCE DESCRIPTION:

GATCTCATAG AGCCCAGTTC TTAGAGTCAA CTAAAGAGTT GATAGGAATT TACTAGGTCC 60  
 AGGGAGAAAA GGCAGTGGTT GGGGTTACTG GAAATTTTGC TCATTTTCTC TAATGACTGT 120  
 ATGAATAAAA GTGAACCTTAC TTGAAA 146

SEQ ID NO:4073

SEQUENCE LENGTH:146

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04802

SEQUENCE DESCRIPTION:

GATCTGAACT TACAGACAGT TGCCAAATTT CTCTAGATAA GAAAATAAAG AATAGAGGGA 60  
 ACCTAACTGG ATAACAAAAA AAAAGGAGAG AGAAAAATGC CATTGCAGTT AAAGGTTATT 120  
 AAATAAAGCT TAGTGTCAAT GTCAAA 146

SEQ ID NO:4074

SEQUENCE LENGTH:146

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04803

SEQUENCE DESCRIPTION:

GATCAGGAGG GACCACAAGG ACAGGAGAAT TAGCAACGAG AGACTGGCTG GCACCAGTNT 60  
 TGGGAAAAC TCAAGTGAG CTCCATTCAT GGTCTATTAA AAGGCCTTN TTGTCATTCA 120  
 GTGATATGTG NCTGGCCCTC GAGAAA 146

SEQ ID NO:4075

SEQUENCE LENGTH:144

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04804

SEQUENCE DESCRIPTION:

5 GATCAAAAAA TTATTTTAT TTATCCTAGC TTTACGTGCA TCTCACGGAA ACAGGATACA 60  
 CGGTGTATAT ATTATNATGC AGTTCGTTGG AACTAGAATT TCAAAAAATT TTAATAAATA 120  
 TGTTTAATCT GTTGCTCTG GAAA 144

SEQ ID NO:4076

10 SEQUENCE LENGTH:143  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04805

SEQUENCE DESCRIPTION:

15 GATCACTGGG CCTACCTGCA CTGTGGGGCC AAGCCCTGTC TTTTCCCAA GCCCTCAAGC 60  
 ACACGCATGA ATGTTTCATCC CGACTTGTA GGGGGCTTT CACCCTTACA AGATGGCAAA 120  
 AGATTCACAT TGCTTTTTT AAA 143

SEQ ID NO:4077

20 SEQUENCE LENGTH:143  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04806

SEQUENCE DESCRIPTION:

25 GATCTGTCAT NNTTTAGCAG TCAAGTGGGA TGGGCATTAT ATAAACAACG TTACAATGTA 60  
 AGGAAAATCT NTAAGGNGAT GGGGAGAGAA AAAGGCAGCT GGTATAATCG GTTACTGCTG 120  
 CTTAGTTCTA CTTAATTTN NNN 143

SEQ ID NO:4078

30 SEQUENCE LENGTH:142  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04808

SEQUENCE DESCRIPTION:

35 GATCTGCCTC TCAGGAAAAA GACTAACTT GTTCTTTTG TTCCTGGCTT TCATCAGTTT 60  
 GTGAGATTTC TCTATTTTTT TTAATATAA TTTTATTCT TTCAACAAAT ATAAAATAA 120  
 40 AAACAACTTT GGNNCANTGA AA 142

SEQ ID NO:4079

45 SEQUENCE LENGTH:142  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04809

SEQUENCE DESCRIPTION:

50 GATCCTGGCT AACCCNGCC TATTTAGATT CCTTCCTCTC ACCTGGACCT TCCCATTTC 60  
 ATCATGCAGA TGGTTTCTTT TTGTAAAGAG TTCCGTTGC CTTCAATTT TTAGAGAAAA 120  
 TAAAGACTGC ATTCATCTCA AA 142

5 SEQ ID NO:4080  
 SEQUENCE LENGTH:141  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04810  
 SEQUENCE DESCRIPTION:  
 10 GATCTTCTTC TCTCTTGTC ACCTATTAAT TGTTTACAAT ATTTGTTACA TCTTATGCAA 60  
 AATACTTGAN TGGGCCATGG TGCCTTTTT CCTGTNAGT ATTTAATTAA AAATGAATTG 120  
 TTTGTCATTT GCAATGTAA A 141

15 SEQ ID NO:4081  
 SEQUENCE LENGTH:140  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04811  
 SEQUENCE DESCRIPTION:  
 20 GATCCCGTTT TCCCCATGAC AATGTTGTAG TGTCCCCAC CCCCACCCC CAGGCCTTGG 60  
 TGCCTCTTGT ATCCCTAGTG CTCCATAGTT TGGCATTGC ACGGTTTCGA AGTCATTAAA 120  
 CTGGTTAGAC GTGTCTCAA 140

25 SEQ ID NO:4082  
 SEQUENCE LENGTH:138  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04812  
 30 SEQUENCE DESCRIPTION:  
 GATCTGTGCA GCAAACCACC ATGGCACAGG TTTATCTATG GAACAAACCT GCACATCCTG 60  
 CACGTGTACC CCTGAAATTA AAGTAAAAAT TGGAAATAAA ACATTTAAAA AGAAAAGAAA 120  
 ACAACAACA ACAACAAA 138

35 SEQ ID NO:4083  
 SEQUENCE LENGTH:138  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 40 CLONE:HUMGS04813  
 SEQUENCE DESCRIPTION:  
 GATCTATCAA AGGAAAAGGA AACTGAGACC GAAAACCTAG GGTCTAAGTT GTTCTAAACC 60  
 CAGGGTTCTC AAATGTGTTG TACAAAAAGT TTCATGTAAT AAAATTAAGC AAATAAACA 120  
 45 AATGAATAGA GGTCCAAA 138

50 SEQ ID NO:4084  
 SEQUENCE LENGTH:137  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear

55

CLONE:HUMGS04814

SEQUENCE DESCRIPTION:

5 GATCACAATG TCATTTCCCTA ATACAAGGCA GGATATGTGG GAAGAATATG TACAATTATT 60  
 TGATTAATAAT TATTTCCAC TGACCTAAAC TTTCAGTGAT TTGTGGGAAA AATAAATAAA 120  
 TGTTCCTACAC CAAGAAA 137

SEQ ID NO:4085

SEQUENCE LENGTH:137

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04815

SEQUENCE DESCRIPTION:

10 GATCCACTGC CTCAGCCTCC CAAAGTGCTG GGATTATAGA CATTATGAT GAATTCTTAT 60  
 15 TTTANNNNTA ATATAAGCA AATACAATTA TTGTTAGATA ACAATGCACA AAATAAAATT 120  
 CAAGGGTGAA AAATAAA 137

SEQ ID NO:4086

SEQUENCE LENGTH:136

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04816

SEQUENCE DESCRIPTION:

20 GATCCATGCC TGTAAGTCCAA GCTACTCAGG AGTCCGAGGC ACAAGAATTG CTTGAACCTG 60  
 25 GGAGGCAGAG GTCACAGTGA ACCATGTTCT GTCAGTGCAC TACATCCTGG GTGACAGAGC 120  
 GAGACTCCAT CTCAAA 136

SEQ ID NO:4087

SEQUENCE LENGTH:136

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04817

SEQUENCE DESCRIPTION:

30 GATCTGGTCC CTGTAGCACA GAGGTCCGAA GAACCGCCTT CAGAAAGAGG AGGCATATTT 60  
 35 GGAAGTNATG GGAAAGACTT TNTGGACAAG GATGGAGAAC ACTTTGGAAA ATTGCATTGT 120  
 40 GCCAAGAGAC AACAAAN 136

SEQ ID NO:4088

SEQUENCE LENGTH:135

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04818

SEQUENCE DESCRIPTION:

45 GATCTACAAC ACCTGCCAGT GACCCCTGCC CAAGGCCTAC CCCAGTTCCT AGCACTGCCC 60  
 50 CACATGCATG TCTGCCTATG CACTGAAGAG CTCTTGGCCC GGCAGGCCAC CAATAAACCA 120  
 GTGTGAACCC CCAAA 135



SEQ ID NO:4089

SEQUENCE LENGTH:133

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04819

SEQUENCE DESCRIPTION:

GATCTGCTGA CAGTGAGTAG TATTTTGTTC TAGGATGTTG TGACTTAGCA AAAATAATAC 60

AGATGCTTC CCCCTTTTG TAGCTTTGAC AATTTGAATT AGATTTCAAA TAAAATCTGA 120

ACAGAAAAC AAA 133

SEQ ID NO:4090

SEQUENCE LENGTH:132

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04820

SEQUENCE DESCRIPTION:

GATCCTTACA TATGCCATCC TTCTGTGTCA TTTTGTGGCT GTTCTGTGTT TTTCTTCCTA 60

GTTATTIATT ATTGTTAATA ACTTACTTTT TCTTACATTC TGTGTAAAT AAAATACAAA 120

GCAATCTTCA AA 132

SEQ ID NO:4091

SEQUENCE LENGTH:132

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04821

SEQUENCE DESCRIPTION:

GATCAAACAG AGGCATGCTA AGATATATTG GGGCTTGAAG CAAAGGGAAA ACTATTTGTT 60

GCTATATGTT TGTAGGGATT TTTGCCAGT TTTAAAAATA CATGTATCAT AAAGTTTACT 120

ATCTCAGCCA AA 132

SEQ ID NO:4092

SEQUENCE LENGTH:132

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04822

SEQUENCE DESCRIPTION:

GATCAGTGGG GGAGGGCACC TCAGCAACCT CTGAGTGTGG ACAATAGCTG CTTTCTTCTC 60

TATCCAAGAG CACCAGGCTG TGCTTGGNTC CTTGCTCTCA GAGTCTATAA ATAAAAGAAT 120

ATAATGATTA AA 132

SEQ ID NO:4093

SEQUENCE LENGTH:130

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04823

SEQUENCE DESCRIPTION:

GATCGGGGGT GGGATGGGAT GGAGTGAGCC CCATCCAGTT AGTTGGACTA GTTTTAAATA 60  
 AAGGTTTTCC GGGTTGTGTT TTTTGAACC ATACTGTITA GTAAAATAAA TACAATGAAT 120  
 GTTGAGTAAA 130

SEQ ID NO:4094

SEQUENCE LENGTH:128

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04824

SEQUENCE DESCRIPTION:

GATCACAGAG GGAGGAGCTC TGAGAACAGT CTCCTTCAAC AGCTCGGCCA AGCAGAACTG 60  
 CTGTACCTCT GACCACTTGT GTTAGGAAAA CTATCGGCTC CCTGTATAAT AAATCAAGCC 120  
 AGGTCAAA 128

SEQ ID NO:4095

SEQUENCE LENGTH:126

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04826

SEQUENCE DESCRIPTION:

GATCTTTGCC TNTAAGCTTG AATATTTGGC TTAAANTTTG TNCATATGAA TACTGTAAAA 60  
 GGTATATTTN ACTACATTTT GAAAGGAAAA AGGTAGTCCT GCTAAAATTG ACATTTAGGG 120  
 ATANN 126

SEQ ID NO:4096

SEQUENCE LENGTH:124

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04827

SEQUENCE DESCRIPTION:

GATCTGAAAT TCTGAGATAT CAATCTAGGA ATTTCAAAAG AAACAGATTA TAGAATTAA 60  
 AACTTAACAC CNGTCTTGTA TTAAGAGAAG TCAACATTTT AAATAAAACC TTGTTCTTAC 120  
 CAAA 124

SEQ ID NO:4097

SEQUENCE LENGTH:123

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04828

SEQUENCE DESCRIPTION:

GATCTCAGAA CTGTGCCAAG CAGACACTGG GACAAAGGGA GAATATCTTG CTCCCCCTCT 60  
 GAGTCAGCCT GGTGTTGCCC TTTATTCCCC TTATGTGCAT ATGATTAAAG AGTTATTTT 120  
 AAA 123

SEQ ID NO:4098

SEQUENCE LENGTH:122

SEQUENCE TYPE:nucleic acid

5 TOPOLOGY:linear

CLONE:HUMGS04829

SEQUENCE DESCRIPTION:

10 GATCCTACAA ACAGACATTT TCCACTCGTG TTTCCATAGT TGTTAAGTGT ATCAGATGTG 60  
TTGGGCATGT GAATCTCCAA GTGCCTGTNT AATAAATAAA GTATCTTTAT TTCATTGATA 120  
AA 122

SEQ ID NO:4099

SEQUENCE LENGTH:121

15 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04830

SEQUENCE DESCRIPTION:

20 GATCTTCTCG CCTCAGCCTC CTGAGTAGCT GGAGCTACAG GTGTGAGCTA CCCAGCATGG 60  
CTCATTGAG ATTTCTGAGT AGAGAAGTAA CATGATTAAA CTGGGTATT GAGATTATAA 120  
A 121

SEQ ID NO:4100

SEQUENCE LENGTH:121

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04831

30 SEQUENCE DESCRIPTION:

GATCAATCTC TCCTCAGCT TTCTTTCCTA CTTTTCGAGC TTGCTGGCT TTAACTGCT 60  
TCATTCTTCT GCTTCATTGG TATCCTTTTT TCTTTTGAAA TAAAAACATG AAATACTTAA 120  
A 121

SEQ ID NO:4101

SEQUENCE LENGTH:121

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

40 CLONE:HUMGS04832

SEQUENCE DESCRIPTION:

GATCGACTGA GTCCAGAAAG TCAAGGCTGC AGAGAGCCAC ATTCAGTCA CTCCAGCATN 60  
GNTGNCAGAG GNAGACCCTG TCTCAAAAAA AAAAGAAAAA AGAAAAAGTG ACAATGNCAA 120  
A 121

SEQ ID NO:4102

SEQUENCE LENGTH:119

SEQUENCE TYPE:nucleic acid

50 TOPOLOGY:linear

55

CLONE:HUMGS04833

SEQUENCE DESCRIPTION:

5 GATCGGTAGG GGGCCTGCTC CTCGGACTCT GGTACCTCT AAGGCTGGGA AAGGCCTGGT 60  
TGCCCACTGC NTCCNTCCCT GCCCCTCCTT TNATGTCCAT AAAGTGGCGT GAAGTGAAA 119

SEQ ID NO:4103

SEQUENCE LENGTH:116

10 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04834

SEQUENCE DESCRIPTION:

15 GATCACCTT AAATCNGGT TGGGAAAATA TCAATTAAT GGAATCTCTG GTTGAATTC 60  
TCAATATGTA TCTTAATATG AAATAGTCA TTAATACTT ATGTGTAAT ATTAAA 116

SEQ ID NO:4104

SEQUENCE LENGTH:115

20 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04835

SEQUENCE DESCRIPTION:

25 GATCTGGGTG GTAGTTACTG GGTGTGTTCT CTTTGTGATA CTCTCTCGAG ATGTACACTT 60  
AGGATTTGCA ATCTTTTCTG TAAATATTT CAATAAAGA CATTATTTT TTAAG 115

SEQ ID NO:4105

SEQUENCE LENGTH:115

30 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04836

SEQUENCE DESCRIPTION:

35 GATCTTAGCT AAATCTCGGT AGATGTCATT ACAACCTNGA AAATAAATCA CCCTAAGTGA 60  
CAGAAATTGA AGCATGTACA AATTATACAT AATAAAGTGT TTTAATAAT TGAAA 115

SEQ ID NO:4106

SEQUENCE LENGTH:115

40 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04837

SEQUENCE DESCRIPTION:

45 GATCCTNCAC CTCTTGGNAA TAAAATTGT TGGTCACTGG GGAAAGCCTG AGTTTGCAAC 60  
CAGTTGTAGG GTTCTGTTG TGTTTTTTT TTTTTTTAA AAAAAAANTN NAATN 115

SEQ ID NO:4107

SEQUENCE LENGTH:115

50 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

55

EP 0 679 716 A1

CLONE:HUMGS04838

SEQUENCE DESCRIPTION:

GATCAGACAA GGAATGAAGC AATGNCTGTG GGCTGGGAAA CTGTACCTAC CTCTCTNCCC 60  
 ACTGCAAATN NCTGGGATAG ACCAAAAGTG AATTTAATTA TGTNTTGGCT GAAGN 115

SEQ ID NO:4108

SEQUENCE LENGTH:115

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04839

SEQUENCE DESCRIPTION:

GATCCCAACT TGAAACAACA GCCAGTGCCT GTGGTAACTT AANNTNTTGT CAAATACTTT 60  
 TATTGATTGG TTTATATGCC ATNTTGTTA TAGAAGAATA TGCCTTTTAA AAANN 115

SEQ ID NO:4109

SEQUENCE LENGTH:112

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04840

SEQUENCE DESCRIPTION:

GATCAGCTCC GTGGGACTGA TATTGGTCCA CANCANAACA GGCAGTGCCT CCTTCCCTCT 60  
 GGGGAATGCA AAAGAAANCA TGGATTAAGN GAGAAGGGAG ACTCTCAGCN TN 112

SEQ ID NO:4110

SEQUENCE LENGTH:111

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04841

SEQUENCE DESCRIPTION:

GATCGCCCAA TAAACATTCC CTTGGATGTA GTCTGAGGCC CCTTAACTCA TCTGTTATCC 60  
 TGCTAGCTGT AGAAATGTAT CCTGATAAAC ATTAAACACT GTAATCTTAA A 111

SEQ ID NO:4111

SEQUENCE LENGTH:111

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04842

SEQUENCE DESCRIPTION:

GATCGGCATA TGCATATCAA AAACAGCTCC CAGCTCTGTA AGGCATTAGA GTGAAAGCAN 60  
 ANAATTTTTT AATGAAACAT TTATTTGCCT TCTTTTACTG CAGTGCTNNN N 111

SEQ ID NO:4112

SEQUENCE LENGTH:111

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04843

SEQUENCE DESCRIPTION:

5 GATCATACTN CTTTATCTAG AGNTTGTCT CAGCTTGCAG AGNTTGAGGA GAAGATAGAC 60  
 CAGTTACATC AAGAACAAGC, TTTCTGAC TTTAATATGT TTNCNGAACT N 111

SEQ ID NO:4113

SEQUENCE LENGTH:110

10 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04844

SEQUENCE DESCRIPTION:

15 GATCACAGTG CAGATAATTA CCTCACACCT GTTAGGATGG CTTTCACCAA AAAGACAAAA 60  
 GATACGTGTA GGCAAGGATG TGGAGGAAAG AGAACTCTTG TATACGTAAA 110

SEQ ID NO:4114

SEQUENCE LENGTH:110

20 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04845

SEQUENCE DESCRIPTION:

25 GATCTTAGTC CGTTTTTTTT TTATATATTG TAACGTAAA TGAAAAAAGA ACCCCCCTNN 60  
 TGTATTATAG TCATGCGGTC TTATGTATGA TAAACAGTTG AATAATTAAA 110

SEQ ID NO:4115

SEQUENCE LENGTH:110

30 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04846

SEQUENCE DESCRIPTION:

35 GATCTGGGAC TTCCAGAAAA CAGAACTNTN AAAANACAAG TTTCTTTTGT TTAACCACC 60  
 CAATCTNAAG TATTTTTTNA TGGCAGTCCT GGCAGACTA ATACAATATN 110

SEQ ID NO:4116

SEQUENCE LENGTH:109

40 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04847

SEQUENCE DESCRIPTION:

45 GATCTATCAT AAAAAGCAAT GTCTTCTCTG GAATGGGGCT TCAGTTTCCA CATTACAAT 60  
 TAGTACATAT TACAATTAGT GATATGAATA AAGGCTGTTA TCCTACAAA 109

SEQ ID NO:4117

SEQUENCE LENGTH:109

50 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

55

CLONE:HUMGS04848

SEQUENCE DESCRIPTION:

5 GATCAAAACA GGTGACAGTG AAGTGGTTTC GGCCCTGCCA ATCTGATATC GTGTATGTAT 60  
 GAGAGTGGTC AGCATTTTAC CACTGGTAAC AAGTTCCTN CTGTNCAAA 109

SEQ ID NO:4118

SEQUENCE LENGTH:109

10 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04850

SEQUENCE DESCRIPTION:

15 GATCTATATA ATTTATGTAT CACCTTCATT GTAAATTTAG CAGGAAATGC ATCACAATTA 60  
 TNATTTTTTT TTTTGNACC AGTGAAACAA TAAAGATGCT ATTACCAA 109

SEQ ID NO:4119

SEQUENCE LENGTH:107

20 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04851

SEQUENCE DESCRIPTION:

25 GATCATGTTG CTGGCTTTTA TAAACTCTAA GCGAAGGAGG AGCACTGCCT CAGCCTTTGC 60  
 ACATGGTAAT GAAGCACTGT TTTTAAATAA AAGAGAGAAA CACCAAA 107

SEQ ID NO:4120

SEQUENCE LENGTH:118

30 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04852

SEQUENCE DESCRIPTION:

35 GATCCGTGAG GGCGTGANTT GGACTGGACC CACTGCTGAT TCCCTGCACC TAGCACAGTG 60  
 CTTGCCACAA AGTGGGCTCT CAATAAATAT TATTGTCCA AGGAAGGAAT GAATGAAA 118

SEQ ID NO:4121

SEQUENCE LENGTH:108

40 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04853

SEQUENCE DESCRIPTION:

45 GATCGTCTGA GCCCNCGGG CACTGGGTGG GGCAGAGCAC GAGTTATTTA AAACAGTTAC 60  
 ACTGCAGGCT TTCGCCAAT AAAGGTGGAC TGACATTCCC TCTTCAAA 108

SEQ ID NO:4122

SEQUENCE LENGTH:107

50 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

55

CLONE:HUMGS04854

SEQUENCE DESCRIPTION:

GATCTTTTAT ACTCAGNTTN AAACACTTTA CTTGGGTTTA CCAAGCCTCA ACTGGCATACT 60  
 CATAAACANG CCACANGGAC CGTTCCTGCA GGCCCAACCC ACAGGGN 107

SEQ ID NO:4123

SEQUENCE LENGTH:107

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04855

SEQUENCE DESCRIPTION:

GATCCGGAAC CCACCTTTTT ATTCACTCCC CATCGTCGTT TGGCCNTTCC ATCNNTCTTT 60  
 NTCTTTCCT CTGCCATCCG TGACACTGAT AGTTNGTCAT ATAAATN 107

SEQ ID NO:4124

SEQUENCE LENGTH:106

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04856

SEQUENCE DESCRIPTION:

GATCTCCAAT CTCCTCGGTT GCAACACCTG AATAAAGCCT TCTTCCCTCA CAATACTTGN 60  
 NNNCTCAGTG ATTGGCTTAC TGTGCAGTGA GCAACCTAGA CCAANN 106

SEQ ID NO:4125

SEQUENCE LENGTH:102

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04859

SEQUENCE DESCRIPTION:

GATCAAAATC ACGTTTGTAG TATCATATCA AAAATTCTAA CCTGTTTACA TTGTTTTNAT 60  
 GTTCATGTTT CTATGTTATT AAAATATTAT TTTGTTACTTA AA 102

SEQ ID NO:4126

SEQUENCE LENGTH:101

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04860

SEQUENCE DESCRIPTION:

GATCTACGGC AATGTGAATC ATTCAGATGT TTACAATAAA AAACACCACA TGAGTAAATG 60  
 AATTCATAA TGTTAATGTT AAATTCATG GAAAGNNNNN N 101

SEQ ID NO:4127

SEQUENCE LENGTH:100

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear



CLONE:HUMGS04861

SEQUENCE DESCRIPTION:

5 GATCCCCCT CAGGACAAAT CTACTCCAGC CACGATGAGA AGTGGGTGAG CCAGGGTCTG 60  
AGTTTCACAT TTGAACCAAA TAAATGCTG TCAAGAGAAA 100

SEQ ID NO:4128

SEQUENCE LENGTH:97

10 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04862

SEQUENCE DESCRIPTION:

15 GATCATGCCA TTGCACTGCA CCTGGGCAAC AAGAGTGAAA CTCCGTCTTA AAAATATAA 60  
GAAATAAAAA AATAAAACC TGCCCCAGA CTGGAAA 97

SEQ ID NO:4129

SEQUENCE LENGTH:97

20 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04863

SEQUENCE DESCRIPTION:

25 GATCCTGAGC TAGGAGAGTA CATTTCGAG ACCTTTGGTT TCCATATTAA GAAATTCAGA 60  
TTTNTATGTA CAATAAGAA GTTCTGGAAT TCTCAA 97

SEQ ID NO:4130

SEQUENCE LENGTH:96

30 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04864

SEQUENCE DESCRIPTION:

35 GATCTCTNTN CAGCCCTAAA GCTCCTTGGT TCTGTAATC CACCAATAGC CCATTTCAA 60  
AATAATTCTA CAGTAATCAG TGGGACTCCT GTTTN 96

SEQ ID NO:4131

SEQUENCE LENGTH:95

40 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04865

SEQUENCE DESCRIPTION:

45 GATCACACCA CTGCACTCAA GCCTTGGCAT CAGAGTGAGA CTCTGTCTCA GTAAAAAAA 60  
AATAAATAAA TAAAAATGTT TAATTAACCA TGAAA 95

SEQ ID NO:4132

SEQUENCE LENGTH:95

50 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

55

CLONE:HUMGS04866

SEQUENCE DESCRIPTION:

5 GATCGTAGGG CATCAGAAAA ACAAAAAGAA ATAGAGAGAG TAAAAGAGAA GCAACAGAAA 60  
GAACTCAATA AACAAAAACA GATTGAAAAG GTAAA 95

SEQ ID NO:4133

SEQUENCE LENGTH:98

10 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04867

SEQUENCE DESCRIPTION:

15 GATCTTTATT GTTCCTCACC CCATTTTCCT CTTGTGTAT GTACTTCCCC CACCCCCCTT 60  
TTTTTAAGTA AAATGTAAAT TCAATCTGCT CTAAGAAA 98

SEQ ID NO:4134

SEQUENCE LENGTH:94

20 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04868

SEQUENCE DESCRIPTION:

25 GATCTAATAA GTATTGGAAT GCTTCCTATT TGCTGATAGA AGTACCAAAT AGTATTATTG 60  
AAGTCTAACA AAGACTTTTT GTTGAGAACA CAAA 94

SEQ ID NO:4135

SEQUENCE LENGTH:94

30 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04869

SEQUENCE DESCRIPTION:

35 GATCGAGGTA AGAGGGACTT TNTTAAAGGC CTAGTCTATG GGATGGGGCG GCGGAGGGAA 60  
TTTTTTGAGA AATAAAATGA AGCTGCAGTG TAAA 94

SEQ ID NO:4136

SEQUENCE LENGTH:92

40 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04870

SEQUENCE DESCRIPTION:

45 GATCACACCG CAGACATTTA GATTTTTATA CCCAAGGCAC TTTAAAAAAA TGTTTTATAA 60  
ATAGAGAATA AATTGAATTC TTGTTCCATA AA 92

SEQ ID NO:4137

SEQUENCE LENGTH:91

50 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

55

CLONE:HUMGS04872

SEQUENCE DESCRIPTION:

5 GATCTTTACT GATGCACTCA TGACAAGTAC CCAATGTATT TTAGCTATTT TAGTAGTATT 60  
TGTTC AATAA ATACGCAAGC TGTAAAGGTAA A 91

SEQ ID NO:4138

SEQUENCE LENGTH:91

10 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04873

SEQUENCE DESCRIPTION:

15 GATCTGCTTT TCTGCATGTT TGTCTGTGTG TCTGCGTTGT GTGTGATTTT CATGGAAAAA 60  
TAAAATGCAA ATGCACTCAT CACAAACTAA A 91

SEQ ID NO:4139

SEQUENCE LENGTH:90

20 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04874

SEQUENCE DESCRIPTION:

25 GATCAAAAAA AATAAATCAC AATGGTATTT AGAAAATATT TTTCAGTAA GGCTAACAAA 60  
ACACTACATA TTAATAATTAT AAAATGCAAA 90

SEQ ID NO:4140

SEQUENCE LENGTH:90

30 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04875

SEQUENCE DESCRIPTION:

35 GATCTTTTGA TGTGCACTAA TGCCATTATT GGTAATGCCG GTTATTGGTG AATACAGCAT 60  
AGTTAAATAA ACTGTTACAG TAAATCTAAA 90

SEQ ID NO:4141

SEQUENCE LENGTH:89

40 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04877

SEQUENCE DESCRIPTION:

45 GATCTAGGGC AAAGTTGTCC AACTGTTGGC CCATGGAACA GCTTTGAATG CAGCCCAACA 60  
CAAATCTATA AATTNCTTA AACATTAAA 89

SEQ ID NO:4142

SEQUENCE LENGTH:88

50 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

55

CLONE:HUMGS04878

SEQUENCE DESCRIPTION:

5 GATCAGTCTC ATGGGCCATC TCTTCCTCAG ATGTAAATAA TATCTGGTTA AGTGTATAT 60  
GGAATAAAGT GGACATTTTA AACTAAA 88

SEQ ID NO:4143

SEQUENCE LENGTH:88

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04879

SEQUENCE DESCRIPTION:

15 GATCTCAGTG ATGTTTGAAC CTTCTGTGTA ACTTTTATT AAGTCTTGT ATCTCTCGAC 60  
TGATTAATAA AGAAGAGAAA CACGTAAA 88

SEQ ID NO:4144

SEQUENCE LENGTH:87

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04881

SEQUENCE DESCRIPTION:

25 GATCTTTATT GGTGACCTTT TGTAAGACAT TAGTTTGAGG TACTACCTAT GTACTTGAAA 60  
ATAATAAAGT GGCATTCTT TATGAAA 87

SEQ ID NO:4145

SEQUENCE LENGTH:86

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04882

SEQUENCE DESCRIPTION:

35 GATCCACTTT GTACTCTAC CAGTAGGAAC GGTCTTCTAA CAGAGAAGAT TATAGCAAAA 60  
AATAAAATCT CTCTTAATT CCCAAA 86

SEQ ID NO:4146

SEQUENCE LENGTH:86

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04883

SEQUENCE DESCRIPTION:

45 GATCCAAAGT CCAGCTCTCT CACTGAAGCC TTATCTTCG GAAAGCTTCC AACAGTAACT 60  
CAGGAATTNA GCTTACTTGC TTAAAA 86

SEQ ID NO:4147

SEQUENCE LENGTH:85

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04884

SEQUENCE DESCRIPTION:

GATCTAAAGA AGAAGGTTCA GTTTTCAAAC AGAATTTAGA GAAAATATAA AGAAATAATT 60  
 TCTTGTCTCA AAAGGCCAAA GTAAA 85

SEQ ID NO:4148

SEQUENCE LENGTH:84

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04885

SEQUENCE DESCRIPTION:

GATCCAGCTG TGCCTAAAGC CTGCCCTACC TCCGGACTTT AAAGTTTGT GAGCCAATAA 60  
 AGTCCCTTTC TTGTTAAGA TAAA 84

SEQ ID NO:4149

SEQUENCE LENGTH:84

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04886

SEQUENCE DESCRIPTION:

GATCTGAAAA GGCATTAATT TATGTACTAA TTCTATAAAC ATGTATTAAT AATTGCAGTA 60  
 TTATTAAATA CAGATGGACT CAAA 84

SEQ ID NO:4150

SEQUENCE LENGTH:83

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04887

SEQUENCE DESCRIPTION:

GATCAGGCCC CCCAACTCTC CAGAACAGGC TACAAACATG CAAATTAGAA TTCTTTTAAT 60  
 ATAAAAAAAA GTACTAAAAT AAA 83

SEQ ID NO:4151

SEQUENCE LENGTH:83

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04888

SEQUENCE DESCRIPTION:

GATCAGAGGG NAGTACAGAA NCCCTGAAC AAAGCNTTAA GTACATACCA TACAGCAAAT 60  
 AAATGGTAGC AAAACATTCT AAA 83

SEQ ID NO:4152

SEQUENCE LENGTH:83

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04889

SEQUENCE DESCRIPTION:

5 GATCTAAAT TTGTAATATT TTTGTCATGA ACTGTACTAC TCCTAATTAT TGTAATGTAA 60  
TAAAAATAGT TACAGTNACT AAA 83

SEQ ID NO:4153

SEQUENCE LENGTH:81

10 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04890

SEQUENCE DESCRIPTION:

15 GATCACATGG TTCACTACCA AATNACCCTC AAATAAGCCA GATGAAAATT TGAAGAAAAA 60  
GGTACCCAG TTCTCTGGAA A 81

SEQ ID NO:4154

SEQUENCE LENGTH:81

20 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04891

SEQUENCE DESCRIPTION:

25 GATCAGAGCG TAGTTTTAAN TGTATTTTGT ATACACTTGT GAAATATTTT ATAGAAATAA 60  
AAATTTTAC TTAGGAGCAA A 81

SEQ ID NO:4155

SEQUENCE LENGTH:81

30 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04892

SEQUENCE DESCRIPTION:

35 GATCCTTCCT CCCACCCTAN GCCTTCCTTT CCTCTTTCCT CCTCACTCTC CCCGTCATGC 60  
TCCCTCTGCC CNGNCCTCAA A 81

SEQ ID NO:4156

SEQUENCE LENGTH:80

40 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04893

SEQUENCE DESCRIPTION:

45 GATCCAAANT AGTAACNTT TNTNATGAAC TGTACTACTC CTAATTATTG TAATGTAATA 60  
AAAAATAGTTA CAGTGACAAA 80

SEQ ID NO:4157

SEQUENCE LENGTH:79

50 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

55

CLONE:HUMGS04894

SEQUENCE DESCRIPTION:

5 GATCATTAGT CAATTGCTTT AATTATAAGC CCTGTTTTTT TTAAATCTA AAAACTAATA 60  
AACATCTATA AGAATTAAA 79

SEQ ID NO:4158

SEQUENCE LENGTH:79

10 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04895

SEQUENCE DESCRIPTION:

15 GATCNACTGT CAAAAAGAAG GGTCAAGTA AAATAAAATG AGAGCAATTA TATATATAAA 60  
TATATATCAT ACACAGAAA 79

SEQ ID NO:4159

SEQUENCE LENGTH:76

20 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04897

SEQUENCE DESCRIPTION:

25 GATCACCTGA ATTCTGGAGG TTGAGGCTGC ACCACTACAT TCCAGCCTGG GAGATAGAGT 60  
GAGAGCCTGT CTAAA 76

SEQ ID NO:4160

SEQUENCE LENGTH:76

30 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04898

SEQUENCE DESCRIPTION:

35 GATCCCAAAT NTTCCACAA GCTTTATTCC AAAAATAATT TTATTTAATA GGTATTAAAT 60  
AATGTATAGA AGGAAA 76

SEQ ID NO:4161

SEQUENCE LENGTH:74

40 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04900

SEQUENCE DESCRIPTION:

45 GATCTTCCTG TTTCAGTCCC CAAGGTGTTG GGATTATGGG CATGAACTGC TGCACCCAGC 60  
CCTTTATACT CAAA 74

SEQ ID NO:4162

SEQUENCE LENGTH:73

50 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

55

EP 0 679 716 A1

CLONE:HUMGS04902

SEQUENCE DESCRIPTION:

GATCACTGGT ATGTAGATAA TAAATGTGA AAATAAAAT TAAAAATAA AACAAAAATT 60  
ATGTGATAAT AAA 73

SEQ ID NO:4163

SEQUENCE LENGTH:73

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04903

SEQUENCE DESCRIPTION:

GATCGTGCAA CTGCACTCCG GCTTGGGCTA CAGAGTGAGA CTCCATCAGA AAGAAAAGAA 60  
GAGAGAGATG AAA 73

SEQ ID NO:4164

SEQUENCE LENGTH:74

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04904

SEQUENCE DESCRIPTION:

GATCAGCATG TAAAGTGTCT GCGTGCTAGT AGGCTCTTAA TAAACACTGG CTGAATATGA 60  
ATTGGAATGA TAAA 74

SEQ ID NO:4165

SEQUENCE LENGTH:72

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04905

SEQUENCE DESCRIPTION:

GATCTCAACT CGTGGCACTA ACTTGGAAAA GGGTTGATTT AAAATAAAAG GGAAGACTAT 60  
TTTACAAGCA AA 72

SEQ ID NO:4166

SEQUENCE LENGTH:70

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04907

SEQUENCE DESCRIPTION:

GATCCTAAAC AGATGCATTG TTGCTTTTCT GTGCTGTCTC TGCAGATTAA AACATAATGA 60  
TTACACTAAA 70

SEQ ID NO:4167

SEQUENCE LENGTH:135

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear



CLONE:HUMGS04908

SEQUENCE DESCRIPTION:

5 GATCTATTAT GCCTTTTAC AAAAAAATG GCTGTAAATN ATTGTAAATA TTAAAGGAAC 60  
TTTCCTTACT TCCTTCCCTT TCTCAGGCTT TTTTGACTG TTCCTTTCCC TACCAACTCA 120  
GGCCTTCTTA TTAAA 135

SEQ ID NO:4168

10 SEQUENCE LENGTH:69

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04909

SEQUENCE DESCRIPTION:

15 GATCTCCCTG GAGGTTTCAT AGCAAGGTTT GACTTGATGA ATTAATTAAT AAAGCTAAAT 60  
ATCCTGAAA 69

SEQ ID NO:4169

20 SEQUENCE LENGTH:67

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04910

SEQUENCE DESCRIPTION:

25 GATCACCCAC GGGGAGGAGA AGGAGGAGTG AGACCCAGCC GGGTCAATAA ACCTGGACGC 60  
TTGGAAA 67

SEQ ID NO:4170

30 SEQUENCE LENGTH:65

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04912

SEQUENCE DESCRIPTION:

35 GATCTGCTTA TAAATAAACT TAACAAATAC ACTATGGAGA TAAAAACAA AATACCACCC 60  
ACAAA 65

SEQ ID NO:4171

40 SEQUENCE LENGTH:64

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04913

SEQUENCE DESCRIPTION:

45 GATCTGTTTC TCTAGAAAAA AAGTCCATCT CTGGCTTTAA TAAAATTATG CATCAGAAAT 60  
CAAA 64

SEQ ID NO:4172

50 SEQUENCE LENGTH:76

SEQUENCE TYPE:nucleic acid

55

TOPOLOGY:linear

CLONE:HUMGS04914

SEQUENCE DESCRIPTION:

5 GATCTCATGC TNAGCAGAGC AAAAATTGTA AAATATTTTG ATTAAAAATC TAGGGACCTT 60  
TATGTCCTAT TTGAAA 76

SEQ ID NO:4173

10 SEQUENCE LENGTH:63

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04915

SEQUENCE DESCRIPTION:

15 GATCAGGAAG TGGCTTTGTG TCTTCCACA TGTATGTATA AATAAAGTGT TCTTTTAAGC 60  
AAA 63

SEQ ID NO:4174

20 SEQUENCE LENGTH:63

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04916

SEQUENCE DESCRIPTION:

25 GATCCTCATT TTTTCCATT GTAAAATTGG GCTAATAAAA GATGCTACCT ACTGACTATT 60  
AAA 63

SEQ ID NO:4175

30 SEQUENCE LENGTH:62

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04917

SEQUENCE DESCRIPTION:

35 GATCACGCTA CTGCACTCCA GCACTCCAGC GCAGGCAACA GAGGGAGACT CTTTGTCTCA 60  
AA 62

SEQ ID NO:4176

40 SEQUENCE LENGTH:62

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04918

SEQUENCE DESCRIPTION:

45 GATCCTGAAT TTCCAGCCA ACAGAACCAA GTGCTAAATA AACTCTTTT TAATAAGTTA 60  
AA 62

SEQ ID NO:4177

50 SEQUENCE LENGTH:62

SEQUENCE TYPE:nucleic acid

55

TOPOLOGY:linear

CLONE:HUMGS04919

SEQUENCE DESCRIPTION:

5 GATCAAAACT CTGTTCTCAA AAATAAATAA AAAATAAAAA ACAAACAAC AACAACAACA 60  
AA 62

SEQ ID NO:4178

10 SEQUENCE LENGTH:61

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04920

SEQUENCE DESCRIPTION:

15 GATCACGCCA CTGCATTCCA GCCTGGGAGA CAGAGTGAGA AATAAATAAC TGTAATGTAA 60  
A 61

SEQ ID NO:4179

20 SEQUENCE LENGTH:60

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04921

SEQUENCE DESCRIPTION:

25 GATCCAAGCA AACTACTTTA AGCAAATATT TGTAATAA AAAACGGAGG ACCGCTCAAA 60

SEQ ID NO:4180

30 SEQUENCE LENGTH:60

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04922

SEQUENCE DESCRIPTION:

35 GATCTAACAG TTCTCCAATA AAATAGTTCT CATTCCAGAG AGCAGATGAA TATATTTAA 60

SEQ ID NO:4181

SEQUENCE LENGTH:59

40 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04923

SEQUENCE DESCRIPTION:

45 GATCTATGAC TGTACTACAC TCCAGCCTGG TCAACAAAGC AAGACCATAT CTCTTTAA 59

SEQ ID NO:4182

SEQUENCE LENGTH:59

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

50 CLONE:HUMGS04924

SEQUENCE DESCRIPTION:

55

GATCCAAGTA TTTNATCTGT GTTGTCTCTC TAAACCCAAA TAAATGTGTA AATGTGAAA 59

SEQ ID NO:4183

SEQUENCE LENGTH:59

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04925

SEQUENCE DESCRIPTION:

GATCCAATAC ACACATANCT TACAACTATC ACAAATTCCT ATTAAATATT AAAAGTAAA 59

SEQ ID NO:4184

SEQUENCE LENGTH:59

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04926

SEQUENCE DESCRIPTION:

GATCTCAAAN NGAAATCTTA TACCAGTGAC AACTGTATTA GAATATATCT GTTCTTAAA 59

SEQ ID NO:4185

SEQUENCE LENGTH:57

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04927

SEQUENCE DESCRIPTION:

GATCTCATAT TAATATTTTA ATATTCTTT TCAAAATAAA ACAGAAAAGC AAGTAAA 57

SEQ ID NO:4186

SEQUENCE LENGTH:57

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04928

SEQUENCE DESCRIPTION:

GATCTGTGTG TTCTTTCAAA GAGAAGTTAT GTCTAATTAA AATGTGTAAC GGACAAA 57

SEQ ID NO:4187

SEQUENCE LENGTH:57

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04929

SEQUENCE DESCRIPTION:

GATCCGNGAG AGAACGACCA CAATTAAAC ACATCAATAA ATACTTTAAC TTCCAAA 57

SEQ ID NO:4188

SEQUENCE LENGTH:56

SEQUENCE TYPE:nucleic acid

EP 0 679 716 A1

TOPOLOGY:linear  
 CLONE:HUMGS04930  
 SEQUENCE DESCRIPTION:  
 5 GATCAAGAAG GACTACCTGT CATGTGAGAC CATCACTAAG AAACCATTG CTGAAA 56

SEQ ID NO:4189  
 SEQUENCE LENGTH:52  
 SEQUENCE TYPE:nucleic acid  
 10 TOPOLOGY:linear  
 CLONE:HUMGS04940  
 SEQUENCE DESCRIPTION:  
 15 GATCCCACTT CGGTCTGTAA ATTCCCTCAA TAAATCACCC AATATTGACA AA 52

SEQ ID NO:4190  
 SEQUENCE LENGTH:51  
 SEQUENCE TYPE:nucleic acid  
 20 TOPOLOGY:linear  
 CLONE:HUMGS04945  
 SEQUENCE DESCRIPTION:  
 25 GATCCCCAAA GCTTAAAATA TCGACTATTT AGAGTGAGAC TCCATCACAA A 51

SEQ ID NO:4191  
 SEQUENCE LENGTH:51  
 SEQUENCE TYPE:nucleic acid  
 30 TOPOLOGY:linear  
 CLONE:HUMGS04947  
 SEQUENCE DESCRIPTION:  
 35 GATCAGCCAN GCATTCCAGC CTGGTGACAG AGCGAGACTC TGTCTCNGAA A 51

SEQ ID NO:4192  
 SEQUENCE LENGTH:56  
 SEQUENCE TYPE:nucleic acid  
 40 TOPOLOGY:linear  
 CLONE:HUMGS04948  
 SEQUENCE DESCRIPTION:  
 45 GATCTTGTTT GTTGAGGGAG ATGGGACTAT AATAAAATTG AATGCTGAAG TTGAAA 56

SEQ ID NO:4193  
 SEQUENCE LENGTH:50  
 SEQUENCE TYPE:nucleic acid  
 50 TOPOLOGY:linear  
 CLONE:HUMGS04950  
 SEQUENCE DESCRIPTION:  
 55 GATCGCGCCA CTGCGTTACA GCCTGGCGAT AATGCAGGAC TCAGTCCAAA 50

# EP 0 679 716 A1

SEQ ID NO:4194

SEQUENCE LENGTH:113

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04965

SEQUENCE DESCRIPTION:

GATCTGTCTT GTAAACCACA TTCTTGACAA CTATTTGCTT TTGAGTAGTT TGTATTTTAA 60  
TATGTGACTT TNGTCTTGAA AAGTAGTAAA GCCATAGACT TGTGCAAAAC AAA 113

SEQ ID NO:4195

SEQUENCE LENGTH:192

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04985

SEQUENCE DESCRIPTION:

GATCATTATG CAATAAAGCT GCTAAAGTNA CATTGTGGT TGATACTCAA GCCTTGATACA 60  
AGCACATATN ATGTAGACAT TTTNAAATGT NAAGCTTTAA CAGGAATAGG ATAGCTGTTT 120  
CAAACCTTGT GCAATTGTAA ATAAATTGTT TAGCTGTGTT TCTTTCATTT TNAATAAAAA 180  
ATTAAAAAGA AA 192

SEQ ID NO:4196

SEQUENCE LENGTH:50

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04986

SEQUENCE DESCRIPTION:

GATCAATTG TAATTGCTTA CATTTTACA ATAAATAATC TGTACGTAAA 50

SEQ ID NO:4197

SEQUENCE LENGTH:282

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04987

SEQUENCE DESCRIPTION:

GATCTTTCTT TGGCAACCAC TTTTACTGT CGCCATAGTT CTTCTTTTC TAGAATGTCA 60  
TATTGGAATC ATATAGTATG TAGCCTTTTC AGACTGGCTT CTTTCACTTA ATAATATGCA 120  
ATTAAGGTTT CTCCATGTCA TTTCATGGCT TAATAGTGCA TTTATTTTGA GCACTGAATA 180  
ATACTCCATT GTCTAGATGA ATAGTTTATC CATTACCTA TTGAAAGACT TCTTGGTGGT 240  
TTCCAAGTTT TGGCAATTAT GAATAAAGCT GTTGTAACA AA 282

SEQ ID NO:4198

SEQUENCE LENGTH:257

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04988

## SEQUENCE DESCRIPTION:

5 GATCTTTTCA GTCAAAAATC TAAGATGATT TATTTTGTAT CACTTTGTTA AAAGCTGAAT 60  
 ATTGTAACT ACAGTTAATA TTAACACTGT ATTTATACTT TCTCAAATA CATCCGCCCC 120  
 ACCACTTCTG GTTGCCTCTG TTGACTATTA ATCCAGATGT AAACAACCAG ATGTTTTTTT 180  
 CTAAC TTGTA CAAACTGACG TGTGTCAACT ATCATGGAAG GAAAAAATG TACAGATTAA 240  
 AATTATTCAG NGTTAAA 257

10 SEQ ID NO:4199  
 SEQUENCE LENGTH:132  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04989

15 SEQUENCE DESCRIPTION:  
 GATCCAGNG TTAGCTATAA CCAGATTAC TCTTTGCTTA CTAGGNTTTC CATNNTCACC 60  
 ATTGGATGAA CCNCTGGTTT AGCCACAGTT GTGAAAATAA ATGGAAGTTG GTTGATTGTC 120  
 TAGAAAGTGA AA 132

20 SEQ ID NO:4200  
 SEQUENCE LENGTH:51  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04990

25 SEQUENCE DESCRIPTION:  
 GATCCGCATC CAAGCTTAAC CAAGGCTCCA ATAAACGTGC TAGGAAGCAA A 51

30 SEQ ID NO:4201  
 SEQUENCE LENGTH:108  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04991

35 SEQUENCE DESCRIPTION:  
 GATCAGTCGC TGACTCATTG GATGAACCAG GAGCCTGCAT GCTACAGCCC ACCTGCCAAA 60  
 TCTTGCCCCC ACCTGCTTTT TAAATAAAG TTTTATTGGA ACATGAAA 108

40 SEQ ID NO:4202  
 SEQUENCE LENGTH:113  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS04992

45 SEQUENCE DESCRIPTION:  
 GATCTTTGCT CTGTTTCCAG TGGGGTTTGA AGCAGAGTTC AGGGAACCCT GCCCAAGGTC 60  
 CTCCTGTTCA GACATTCTTA TGTGAATAA AGTATGTTTG ACTTCCCCGG AAA 113

50 SEQ ID NO:4203  
 SEQUENCE LENGTH:471

55

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04993

SEQUENCE DESCRIPTION:

GATCCACCT CAAATTAGCT TGATTGCAAA ACAGATATTG GAACATGGAG CTGAGAAGAA 60  
 GATGGTCTGG GCTTCAGGCA CAGCTGGGTC CAGGGACTCA GACNNNTTG TCTCCATCTA 120  
 TCTNCTGTGT TTTNCTGTAG GAGGTGGCCT CACTTTCCCC TAGTTCAAAA GGGCTTACTC 180  
 CATATGATGG GGGAAAGGAA GACAGGNCCA TGAACAGCCC TAGACTTCCA TCAGCCCACC 240  
 TGGGAAGCCC TCACAGGAAA ATNAGTCTCA TTCCTAGTAC ATGAAATCTC AGGGGAGGGA 300  
 ACTCCGATTT GGCACCTTC AGTNATGTGC CCNGTCCCTN GGGGCCAAAT CCNCTTTTGG 360  
 GTTGGTGGG GCGGTTTCA AGTGATTGGG NAAATNGCCA ACCNAAAGTT CANGTTNGAA 420  
 GTTGGAGNAA NGGGGAANTT TTNCCCAAAA AGAAANGGNA AGGTTTGNTA N 471

SEQ ID NO:4204

SEQUENCE LENGTH:338

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04994

SEQUENCE DESCRIPTION:

GATCAGGAAT GGGTGATTGG AGATTATTAG ATTCTAGGTT AACTTCTACC ACTTTACCCT 60  
 AATACATAAA ACTTTTTCTT AAATAAATGA TGGAAAGGAAT AATACTGGT TACCTGGCAT 120  
 TATTTTTCAG TAAGAAAAAA GCTTTACTAA CCACTACATT TATGGAATTT TGTAGGGGTA 180  
 AGTATTTTAT AGGTCATAAA AAACACCATA ATATAACGAA TCTCATTNC TTTAAATGTG 240  
 AATTAAATCC TAACAGTCAT CTTTATAAAA TGACCATAGG CTAAANTCTT ACGTGTAAGT 300  
 NCTACTACAN TAAATANTTT CTGGAACCT TTTATAAA 338

SEQ ID NO:4205

SEQUENCE LENGTH:237

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04997

SEQUENCE DESCRIPTION:

GATCACCTTC CAGACCACAG CAGATGTGGG ACACACAGCC TCCTGACTCC AGGAAGAGCC 60  
 AGANCTGTGC AGGGAGGAAG GGGTGAGAGG GGGGCCCCCA CACCTAGACT CAGTAAGGAA 120  
 GTCGGGTTNG ACCTTAACAT CTNCATTGGA CAACTCCACC CNTNCCTTGG CCTTGCCCCT 180  
 GCCCGNNTAC ACTCCTACGT NTCCANGGGC TTNGGCCGTG ACTTAGGNAG AGGAGTN 237

SEQ ID NO:4206

SEQUENCE LENGTH:313

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS04998

SEQUENCE DESCRIPTION:

GATCATCCGC AGNCTCATGT TAAAAGGATT TTAGCTCACT AAAAGTGTA TAATGGAAAT 60  
 GTGGAAAATA TCGTAGGTAA AAGAACTAC CTCATGCTCT GAAGGTTTGT TAGAAGCACA 120



EP 0 679 716 A1

5 ATTAACATC TAAATGGCT TTGTTACACC AGAGCCATCT GGTGTGANGA ACTCTATATT 180  
TGTATGTTGA GAGGGCATGG ANTAATTGTA TTTNGCTGGC AGTAGACACA TTCTTTATTA 240  
TTTGACAGATT CCTCATCAA TCTGTANTTA TGCACAGTTT CTGTTATCAT TAAACAAAAG 300  
GAATCCNGTT AAA 313

10 SEQ ID NO:4207  
SEQUENCE LENGTH:271  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS04999  
SEQUENCE DESCRIPTION:  
15 GATCACATCT NTNTGAAGCC AAAGCCCCGT GGTGCCCCAT GAGAAGTGTC CTTTTTCATT 60  
TTCACCAAAA TGAAGTGTGA ACGTGATGTT TTCGGATGCA AACTCAGCTC AGGNATTCAT 120  
TTTGTNTCTT AGTTTTATAT GCATCCTTAT TTNTAATACA CCTGCTTCAC GTCCCTATGT 180  
TNGGAAGTCC ATATTTGTNT GCTTTTNTTG CAGCATCATT GCCTNTACAA TACTGNCCGG 240  
TGGACAAANT GACAAATNGAT ATGTNTTGCT N 271

20 SEQ ID NO:4208  
SEQUENCE LENGTH:345  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
25 CLONE:HUMGS05001  
SEQUENCE DESCRIPTION:  
GATCGCACTG TGGGCCGGGG CCCTGGAGGG CTGCTCTGTG TTAATAAGAT TGTAAGGTTT 60  
GCCCTCCTCA CTGTTGCCG GCATGCGGGT AGTATTAGCC ACCCCCCTCC ATCTGTTCCT 120  
30 AGCACCGGAG AAGGGGGTGC TCAGGTGGAG GTGTGGGGTA TGCACCTGAG CTCCTGCTTC 180  
GCGCCTGCTG CTCTGCCCA ACGCGACCGC TGCCCGGGTG CCCAGAGGCT GGATGCCTGC 240  
CGGTCCCCGA GCAAGCCTGG GAACTCAGGA AAATTCACAG GACTTGGGAG ATTCTAAATC 300  
TTAAGTGCAA TTATTTTAA TAAAAGGGGT ATTTGGAATC AGAAA 345

35 SEQ ID NO:4209  
SEQUENCE LENGTH:406  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
40 CLONE:HUMGS05002  
SEQUENCE DESCRIPTION:  
GATCTTACTT TCATAATTCT TTGATTCTAG CTTGCAGAGT CAAGACGNAA AGNTAACTCA 60  
TGGGATGGAC AAAGTGAAG ATGTAAAATA AGTAAGGCTT TNTGGGCCAA AAAGCCTCTT 120  
45 CTTACAGAAA ATCAAAATTT AAAAGAACAT TGACCTCAA ACAATAAAAC TGTCTGGTT 180  
ATGCAATAGA AATAGCTATA TAAATGGAAT CATATCCTTA ATGAACACCT CCTGTGGCTA 240  
CCCAACTTTT CACACATCTT ACTGATTATA GGCCTTGCTG TGAATGCTTT CTTGCTCTAT 300  
CTGAAGTATT CCCACCAGAG TTGTTTCCAA CNTTATTTCC TATATTATGA AAAATGANGT 360  
TTTTTAAACA TTGTAACAAA GTATTTGNAA GGTAATGTAT ACTGTN 406

50 SEQ ID NO:4210

55

SEQUENCE LENGTH:74

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05003

SEQUENCE DESCRIPTION:

GATCTAAAAA AANNATAATT ACATTAGTAA CACAACATAA GAAAAAGACA GGGACAAAAA 60

CAAAAAAAAA TAAA 74

SEQ ID NO:4211

SEQUENCE LENGTH:230

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05004

SEQUENCE DESCRIPTION:

GATCCTATGT GGAAGGGCTG TTTTAAAGA AAAAATTTT GGTAAACAGT ATTGTGTAAA 60

ATTGCTTTTT GTATACCAAT ATATGCATGT TTTGTGCATG AGTAGTACTT GTGTTGATAC 120

TCCTGTTGAT GTTAAATTAC TATATAATAT AANCAGTATG TGTTTTATA TATCATTGTG 180

TAAATTTAAT ATAACATATG CNGTAATAAN CCATTNGTNT TACGGGCAAA 230

SEQ ID NO:4212

SEQUENCE LENGTH:161

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05005

SEQUENCE DESCRIPTION:

GATCTCAATC AAGTTAGCAT GCTTNCCTCA GCTGCCCTAT NACCTGCCAG CTCATCACAA 60

AGAACCACGG CCACCCAGGT CATGGCAAAC TCTGCTGGAC TTAACCTCAT CAATGTAGTG 120

GGCTCTNTTT GTGGGGCCCA GGCTTTGATG AGTNGGNNN N 161

SEQ ID NO:4213

SEQUENCE LENGTH:259

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05006

SEQUENCE DESCRIPTION:

GATCGAGACC ATCCTGGCCA ACATGGTGAA ACCCCGTCTC TACTAAAGAT AAAAAATTA 60

GCTGGACATG GTGGCGGGCG CCTGTNTTCC CAGCTACTGG GGAGGCTGAG GCAGGAGAAT 120

GGCTTNGAGG CAGTAGAACT GCTTGAACCC TGGAGGCGGA GGTTACAGTT ATCCGAGGTT 180

GTGTCATTGC ACTCCAGCCT GGGGAACAGA GCGAGACTCC ATCTCAAAAA AAATAAAAAA 240

CTTCAGCTTT TGCATGAAA 259

SEQ ID NO:4214

SEQUENCE LENGTH:71

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05007

SEQUENCE DESCRIPTION:

GATCATGCTT TAAGGTTTAT GTAAAGAAAG TGTACTGATG TTCTTACATT AAAGCTTTAC 60  
 AAAGATTTAA A 71

SEQ ID NO:4215

SEQUENCE LENGTH:67

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05008

SEQUENCE DESCRIPTION:

GATCTTGGTG GTAGTAGCTG TCTATGATTC TNGCTCAGCA AAGTAAAATA AATGTTAAAT 60  
 ATGGAAA 67

SEQ ID NO:4216

SEQUENCE LENGTH:143

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05009

SEQUENCE DESCRIPTION:

GATCAATGA AATAATGTAC ATGAAAAGAC ATATATAAAA TGTATAATAC AGACAAAGGG 60  
 NCCTGTTACA CAGTTGGAAG TCATNCCCTC AGATTTTGGG CCTAGGAAGG TAGGTGATTT 120  
 AAACCTCACTG AAAGCANNNGN NNN 143

SEQ ID NO:4217

SEQUENCE LENGTH:362

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05010

SEQUENCE DESCRIPTION:

GATCACAGCC ACTGGTCCAT AACAATTAGG AAAAATCATT GGACAATGGT TGTCAGGTTT 60  
 CTCCATTGGA GGGAAATTGTG TTTCATGATT AGGCACTGTT TCTGCTCCTT AAAAATGACT 120  
 TTCCAGTCTA TCCTCCACAG CTCTTTGTTC TACACTCTAG GGAATCATT TTTTCCCTC 180  
 ATCTTCCTTA GTCACCTGCA AAGGACATTA GAGAATATGC CCTTTTGGT GGATAAATGG 240  
 GTTCTTCAAC CTGCTTTCTG CCTGTAGAAA ATTAGAGGCC AATAATCTGT TTATATCTTG 300  
 TAGAATGTCT ATTTAGCTG GTACCGGTAC TTTTGTCAAT AAAGTTCTTT TTTAACTTA 360  
 AA 362

SEQ ID NO:4218

SEQUENCE LENGTH:213

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05011

SEQUENCE DESCRIPTION:

GATCTGNAA GAGCACATAT GTGTCAGGGC ACAATTCCTN CTCATAAAAA CCACACAGCC 60

TGGAATTGG CCCTGGCCCT TCAAGATAGC CTTCTTTAGA ATATNATTTG GCTAGAAAGA 120  
 TTCTTAAATA TGTGGANTAT GNTTATCCTT AGCTGGAATA TTTNCTCTAC TTCCTGTCTG 180  
 CATGCCCNAG GCTTCTGAAG CAGCCAATGT CGN 213

5

SEQ ID NO:4219  
 SEQUENCE LENGTH:169  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear

10

CLONE:HUMGS05013  
 SEQUENCE DESCRIPTION:  
 GATCACTACA ACANTTTNTT TGCCTCCAAG GTCCTCTGAG GCAGCAGGCT CTGGGGCTTC 60  
 TNCTGTCTCTT TGGAGGGTGT CTTCTGGGTA GAGGGATGGG AAGNAAGGGA CCCTTACCCC 120  
 CGGNTCTTCT CCGACCTGC CAATAAAAAT TTATGGTCCA AGGGAGAAA 169

15

SEQ ID NO:4220  
 SEQUENCE LENGTH:235  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05014

20

SEQUENCE DESCRIPTION:  
 GATCGCGCAG GATTTCAAAA CCGACCTGAG GTTTCANAGC GCANCATCGG TCGGCTGCAG 60  
 GAGGCTAGCG AAGNANCCTG GTGGGTCTGT TCGAAGATAC CAACCTGTGT GCCATCCACG 120  
 CTAAGAGAGT CACCATCATG CCCAAAGACA TCCAGTTGGC TCGCCGGATA CGGGGAGAGA 180  
 GAGCTTAAGT GAAGGCAGTT TTTATGGCGT TTTGTAGTAA ATTCTGTAAA ATAAA 235

25

SEQ ID NO:4221  
 SEQUENCE LENGTH:196  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05016

30

SEQUENCE DESCRIPTION:  
 GATCAAAAGTC CTACAGTGGC TGTCACGCAG CCACNAGGTC ATCTCCTTTC ATCCCCACCC 60  
 CAAGGCGCTG GCTGTGACTC TGCTTCCTGC ACTGACCCAG AGNCTCTGCC TGTGCATGGC 120  
 CAGCTGCGTC TACTCAGGTC CCAAGGGGTT TCTGTTTCTA TTCTTTCTC AGACTGCTCA 180  
 AGAGAAGCAC ATGAAA 196

40

SEQ ID NO:4222  
 SEQUENCE LENGTH:262  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05018

45

SEQUENCE DESCRIPTION:  
 GATCTGCACC AGACTGTTAC CTTCTGGGGG AGATGGAGAT TTGACTGTTT AAAAAGTAA 60  
 AACAGCGAGG AGTCTTTCTA GAACTTTTGA AACTAAAAG GATGAAAAAA ATTAGCAAAC 120  
 CGAAGTTTCT TCAATGACCC CTCGAGAACT TTGGGACCAG TTTCTATGG GGGACTCAGT 180

50

55

TTCAGAGAAC TGAGACAGAA GCTCTTCTGT CGTTATATTC TTCTTTCCTT TTTTGGATT 240  
TATTAAATAT TTTCTGTGGA AA 262

5 SEQ ID NO:4223  
SEQUENCE LENGTH:277  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
10 CLONE:HUMGS05019  
SEQUENCE DESCRIPTION:  
GATCCTGCAG TGTCTGTGG GTTCATCTCG GATGGGCGCT GCATAACAG CCTGCAGGGA 60  
ACGTCTGGGA GAACCAGCTT CACAACAGAT ATAATAAGGA AGAAGTTTGA AATATTGCAA 120  
GANTTGCAGAA AGTGTGACAC ACAGATACAA AGTGGGCACA TGCTCGTGGG AAAATGTTGC 180  
15 CAATAGACTT GCTTGACTCT GGAGTTACCC CGAACCTTCA ATTTGTTTAA AAAAAAAAAA 240  
GGGCANTTTN TTGNNGNGCA NTAAGGTGNC CTGCAAA 277

20 SEQ ID NO:4224  
SEQUENCE LENGTH:271  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05021  
SEQUENCE DESCRIPTION:  
25 GATCGCGTCC ACCTTCATCG CTGTGGTGCA AGCCATCGTC CGCACGGGTG GTGGCTGGGC 60  
AGCTGCCTCG GACTCCAGGA AAGGCGGGGA GCCTGCCGGC TACTGAGTGC TCCAGGAGGA 120  
CAAGGCTGAC AAGCAATCCA GGGACAAGAT ACTCACCAGG ACCAGGAAGG GGACTCTGGG 180  
GGACCGGCTT CCCCTGTNAG CAGCAGAGCA GCACAATAAA TNAGGCCACT GTGCCAGGNT 240  
30 CCAGGTGGCC TNCCTGGNCT GTTCCCCAA A 271

SEQ ID NO:4225  
SEQUENCE LENGTH:138  
SEQUENCE TYPE:nucleic acid  
35 TOPOLOGY:linear  
CLONE:HUMGS05023  
SEQUENCE DESCRIPTION:  
GATCCACGGA AGACTGTCAG CAGACTTCAC CAGAAAATT TCACGCCAGA NGGCAGTCGT 60  
40 GATATATACA AAANGCTGAA AGGAAANCAC TGCCATCCAG GANTACTATC TCCAACNTC 120  
CTGTGTTTCA AAANTTAN 138

SEQ ID NO:4226  
SEQUENCE LENGTH:64  
45 SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05024  
SEQUENCE DESCRIPTION:  
50 GATCTGCATT TAAAAATATG GTCCTTGTTC TATATGATTA AATGGTTTGT TTTCATAGAT 60  
GAAA 64

55

SEQ ID NO:4227

SEQUENCE LENGTH:296

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05025

SEQUENCE DESCRIPTION:

GATCCCGGCT GTTGGTGAGC AAAGAGCCCA GGCCCTAGA GTGCGCATGT NCAGGCTCCG 60  
 CTGTTAGANT CACAGCGGTT CAAATCCGGC ATCTGGTCGC TGAGTGGCCT CAGGCAGTGA 120  
 CCACGCTCCC GGACCAACC TTCAGCTTGC CCAAAGCAAT AATCTTTCCT AAAGAAGTGC 180  
 TTGGNTGGGG ATGGTGGCTC ACGCTTGTA ATCCAGTAC TTTGGGAGGC CAAGGCAGTC 240  
 TGGGCAATAT AGTGAGGCTC CCATCTGTAC TAAAAATAAA AAAGTTAGGC GTGAAA 296

SEQ ID NO:4228

SEQUENCE LENGTH:135

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05026

SEQUENCE DESCRIPTION:

GATCAGACCT CTCATGTGT GGAGATGAAA AAGCCCTAAA GTTTATGTTT CTAATGTGTC 60  
 ACAGAATAGG ACGATATGAT TCTACAACAT AATCAACTCC CTATTAAATT CTTAATGAA 120  
 GATTTTTTTT TAAA 135

SEQ ID NO:4229

SEQUENCE LENGTH:337

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05027

SEQUENCE DESCRIPTION:

GATCCTCTTT CTAGCATGAA TGAAGGATGC CAAGAATGAG AAAAAGCAAG GGGTTTGTCC 60  
 AGGTGGCCCC TGAATTCTGC GCAAGGNATG GGCCTGGGG AACTCAAGGG AGGGCCTAAA 120  
 GCACTTGTA CTTTGAACCG TCTGTCTGGA GGTGAGAGCC TGTGGAAAG CAGGGGTAGA 180  
 GGGGAGCCCT GGAAGCAGGG CTTTCCGGA TGCCTAGGGG TGGGCAGTGC CAGCCCCCTC 240  
 TCACCACTCT TCCCCTTGCA GTGGAGGAGA GAGCCAGAGT GGATACTATT TTTNATTAAA 300  
 TATATTATTA TATGTAAATA AAAAANTCAT ATCCAAA 337

SEQ ID NO:4230

SEQUENCE LENGTH:179

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05028

SEQUENCE DESCRIPTION:

GATCCTTCGC GAGCGAGTGA ACAAGAGGCG GGTGAAGGAG ATGGTGAAGG AGTTCACACT 60  
 GCTGTGCCGG GGTCTCCATG GCACAGGGTA CACAGCTGAC TACTGAGGGG TGCCCCCATC 120  
 CCATCCACCC CTTCTCTTCA TCCTCCCTA TTCCCAAAGN GTAAACCTGG NCCCTNAAA 179

SEQ ID NO:4231

SEQUENCE LENGTH:207

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05029

SEQUENCE DESCRIPTION:

GATCGCTGGA CGCTATGAGA GGGCGTCCCA GGGCCCAGCC TCCCACAGCC GTTTCAGCAG 60  
 GGACAGGGGC TGAACAGGCC CTATTCCAGC CCCCTTGCTT CACTCTACCG GACAGACGGC 120  
 AGCAGTCCCA GCTCTGTTT CCTTCTCGGT TTATTCTGTT AGAATGAAAT GGTTCCTATA 180  
 AATAAGGGGC ATGAGCCCTT CCTCAAA 207

SEQ ID NO:4232

SEQUENCE LENGTH:386

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05030

SEQUENCE DESCRIPTION:

GATCTGAAAT AGTTTTCTTC CACTACATTG TTGAAATCAA TGAAGCAATT AGTTTCTCAT 60  
 TCAGAAATGT GCACACTAAT ATTTAGTTTT GCTTCTCGT GGATAATATT AAGCNCCTTAC 120  
 TCTGCAGTTT CCTGGAAGTT GTGTCAACTG CAGTGATACT ATTCAGGATG GTGGGAAATC 180  
 CCCAAAAATA TGTATGTGTG GGCCTGCTTA GATTACTATA TTTCAATAGT AATCTTTTGT 240  
 CTCTTGCGGT GCTCATGATG TGTGGGACAC ACGGAAGGCA TTGCTGTAGT CAGTCATTTT 300  
 GGTTTTCTTC TATAGCCATT TTATTATTTT AGTGTATTAG TTATGAAGAT AATATTNNCT 360  
 ATTTGTAAAT NGCTACTTTG TATTTN 386

SEQ ID NO:4233

SEQUENCE LENGTH:356

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05031

SEQUENCE DESCRIPTION:

GATCTTCANA TTGCTGTGAT TAATGCATCC AGATTNTTTT CCTAGTATTT CCAGGTTAGA 60  
 ACCTGTGGAT TGTTTCANTT GCATATAGCT TGGTTTCCAT AACATAGAGC ATTGGTTGAC 120  
 TGTTTACAGA AGACTCACTC ACCAGGATAA ACATTGCNGT ATGTNACAGT AAAGCTATCT 180  
 GGAGAGANCA CATAAATGAT TTTGGCATAC CATTAGAGAA ACCATTTGTA AACTCAAAT 240  
 GNCCACATAA NGCTTATCAG GGGGTCTAGA TTGGTNTTGT NNTATACCAT ATGGGATGAN 300  
 GNAAANTAGA AATGTCAGTA GAACTCATTG AGGGTGTCT NGCCAGCTGC NGANAN 356

SEQ ID NO:4234

SEQUENCE LENGTH:105

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05033

SEQUENCE DESCRIPTION:

EP 0 679 716 A1

GATCTGCTTT TTTNAAATGT TAAGGACATA TTTTNAAGTT ACTGCTGAGT GAAGAAAGAA 60  
CATAGCTCCC CCTCATTCCC TGCCTAAGAA AGGAGCTTAA AGAAA 105

5 SEQ ID NO:4235  
SEQUENCE LENGTH:343  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
10 CLONE:HUMGS05034

SEQUENCE DESCRIPTION:  
GATCAGGGCC TTCCTGCCCT CCGCTGGGCA GGTCTGGCCT TGCNCTCTTG GCAGGGCCCC 60  
AGCCCCCTTA ACCACTCTGC AGCTCACCAT GCAGCTGATG CCAAANTTGT GGTGTCCAGT 120  
GTGCAGCAGC CCTGGGAGCC ACTGCCACCT TCAGAGGGGT TCCTTGCTGA GACCCACATT 180  
15 GNTTCACCTG GCCCCACCAT GGCTGCTTGC CTGGCCCAAC CTAGCCTTCT GTGCCATGNT 240  
AGAGCTTGAG CTGTTGCTCT NCTTCAGGGG AGGAAATAGG GTNGAGAGNG GGAAGAGNNT 300  
TNGCTCCTAA GTGTTGCTGC TGTGGCTTTT TTTGCCTTCT GCN 343

20 SEQ ID NO:4236  
SEQUENCE LENGTH:370  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05035

25 SEQUENCE DESCRIPTION:  
GATCATTCA AAACCTATTT CCTATGTAAC TGCATTGAGA ACTGCATATG ATTCGCTGAT 60  
ATATGTGTTT TTCACATTTG CGAATGGTTC CATTCTCTCT CCTGTACTTT TTCCAGACAC 120  
TTTTTTGAGT GGATGATGTT TCGTGAAGTA TACTGTATTT TNACCTTNTT CCTTCCTTAT 180  
30 CACTGACACA AAAAGTAGAT TAAGAGATGG GTTTGACAAG GTTCTTCCCT TTTACATACT 240  
GCTGTCTATG TGGCTGTATC TNGTNTTCC ACTACTGNTA CCACANCTAT ATTATCATGC 300  
AAATGCTGTA TTCTTCTGTT GGGTGGAGAN AAAGGATTTC TTGNAGGTTT NGTTTTTAAA 360  
ATTNAAAGCN 370

35 SEQ ID NO:4237  
SEQUENCE LENGTH:529  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
40 CLONE:HUMGS05037

SEQUENCE DESCRIPTION:  
GATCTGTTTC GTGCATTGGA AGACCCACCC CAAGCTTGGC AGNCGAGCNN ATTGTATCCT 60  
GGGGCTCCCT TCATCTCCAG GGAGTCCNNT CCCCggccct ACCAGCGCCC GCTTGGCTGA 120  
45 GCCCTACCC CACACCAGGC CGTCTCCCG GGGCTCCCT TGGAAACCTG CCCTGCCTGA 180  
GGGGCCCTCT GCCCAGCTTG GGGCCAGCTG GGCTCTGCCA CCTACCTGT TCAGTGTCCC 240  
GGGGCCGTTG AGGATGAGGC CGCTAGAGGC CTNAGGATGA GCTGGAAGGA GTGAGAGGGG 300  
ACAAAACCCA CCTTGTGGA GCCTGCAGGG TGGTGCTGGG ACTTAGGCCA GTCCAGGGG 360  
CAATGTATTG GCCTGGAAGG TGGGGTTTGG GATTNNGGG GCTTGGTGCC AAGCTTTCCT 420  
50 TTTNNANGNT GACCTTTNTT TNGTNCCTNC CCCTTGGGG NGGGNTNAAA AGNCCCAAGT 480  
TTGANANTGG GAAATAAANT TTTTGGGC CTCCGNTTT CCCTTAAA 529

55



SEQ ID NO:4238

SEQUENCE LENGTH:365

SEQUENCE TYPE:nucleic acid

5 TOPOLOGY:linear

CLONE:HUMGS05039

SEQUENCE DESCRIPTION:

10 GATCGTTTTC TGATTGTGAT GCTTCACAAA CTTGGATTG ACAAAGAAAA TGTATGNN 60  
 NGAATTGCGA CAGTGTATTC GCAACTNTCC TCAGTTCAGA TTTGACTGGT TTCTTAAGTC 120  
 CAGAACTGCA ATGGAGCTCC AGNGGAGATG TAATACCTTA ATTNCTTTGA TTGAAAGAGA 180  
 AAACATGGAA CTAGAAGAAA AGGAGAAGGC AGAGAAAAAG AAACGAGGAC CAAAGCCTTC 240  
 ANCACAGAAA CGTAAATGG ATGGCGCACC TGATGGTCGA GGTAGAAAAA NGTGGCTGGA 300  
 ANCTATGNNT ATGGTTTNT TTCATAATC ACTNAGCTT ANACCNAGTA GTTCTNTNA 360  
 15 NTTTN 365

SEQ ID NO:4239

SEQUENCE LENGTH:114

20 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05040

SEQUENCE DESCRIPTION:

25 GATCATTACA ACANTGTNT GCCTCCAAGT CCTTGAGGCA GCAAGTCTGG GGCTTCTGTN 60  
 TCNTTTGAGG GTGCTTCTG GGTAGAGCGA TGGGAAGGAA GGACCCTTAC CCNN 114

SEQ ID NO:4240

SEQUENCE LENGTH:312

30 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05041

SEQUENCE DESCRIPTION:

35 GATCATCCGC GCGGCCCGG CTCGTGGGGC GCCTGGAGTG AGGGTTCTGG TTCCCGCCGG 60  
 CGAGGATTGT TAAATNAGT CTTGGAAGN AGACCCCTAG TGACTTCTTA AAGCAAATCA 120  
 TCGGACGACC AGTTGTGGTA AAATTAAATT CTGGAGTGGA TTATCGAGGG GTCCTGGCTT 180  
 GCCTGGATGG CTACATGAAT ATAGCCCTGG AGCAGACAGA AGAATATGTA AATGGACAAC 240  
 TGAAGAATAA GTATGGGGAT GCATTTATCC GAGGAAACAA TGTGTTGTAC ATCAGTACAC 300  
 40 AGNAGAGACG GN 312

SEQ ID NO:4241

SEQUENCE LENGTH:306

45 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05042

SEQUENCE DESCRIPTION:

50 GATCGGAGTA CANAGTNACA NTTGGAGGGC AGGGGGACTN TAAGGCAAGG AGATTACAGT 60  
 TGGGAAGGAG GCAGTGGCAG AGGGGTGAGG GACAGGGGCC CTTAAGTCCA GCGAGGAAAG 120

55

EP 0 679 716 A1

CTCGGTGTGG GCCCGTCTAC GCTCCGTTTG GGGTGACCTG GAACGCCTCT TCTACAGCTC 180  
 CTNCAGCATC AGCAGCCTCT TGTCAAGTTT TGCCTCGCCC ANTCTATCCC AACCCAAATA 240  
 AGACACTTTC TTCACGNCAT ATTATCTTTG TCCTTTCTTT TTTAAGAACA TCACAAAACC 300  
 ATGAAA 306

SEQ ID NO:4242

SEQUENCE LENGTH:287

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05043

SEQUENCE DESCRIPTION:

GATCTTAAAC CCAGTCTTGA CAGACTAGAA GTTAAGTTTA ATACAGAAAA TGTCCTGTTC 60  
 ACTTGAAAGA AAAGACCTAC TTTTAAATG GACACTATCT TGGTTCITTT TTTTAAAGTC 120  
 ATCTTTTGT TATAAGTGAC CTTTGTCTGG AATGTCTGAA AAGTAGTTAA TGCTTTTNGG 180  
 TATTGAAGTA ATGGGTAACT AAAATGGACT TCCATAGTAT TGACTGTAGA AGGAGCCTCT 240  
 ACAATATTGA CTATATATNN NNATAAACTA CTGGCAAGGN ACTTAAA 287

SEQ ID NO:4243

SEQUENCE LENGTH:324

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05044

SEQUENCE DESCRIPTION:

GATCTCCACT GTTGGGTGGG TGGGCCCTGC CGGGACCCTG CTTACAGGC AGGCTTTTCC 60  
 TCCAACCTGT GGCCTGCAG CAGGGCAGGA AGGGGAAACA CAGCTGATGA ACTGTGGTGC 120  
 CACATGACCC TTGTGGCACA GATGCCACG TATGTGAAAC ACACATGGAC ATGTGTCCCA 180  
 GCCACAGTGT TATGCTCTGT GGCNGGCTCA CCTTTGCTGA GTTCCGGGGT GCAATGGGGG 240  
 AGGGAGGGAG GGAAAGCTTC CTCCTAAATC AAGCATCTTT CTGTTACTTG ATGTTCAATA 300  
 AAAGAATAGT TGGAAGGCT GAAA 324

SEQ ID NO:4244

SEQUENCE LENGTH:65

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05045

SEQUENCE DESCRIPTION:

GATCATTCAT ATGTGTACAT AAAATTTTAA AAATAAAGG AATTGACTGC TTTGTTAATG 60  
 AGAAA 65

SEQ ID NO:4245

SEQUENCE LENGTH:288

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05046

SEQUENCE DESCRIPTION:

EP 0 679 716 A1

GATCCAGAGA ATGAATCCCT GACCGCATCA CCTAAACTGT CTTCCAAACA TGAGACAAAG 60  
 CTGACTGTTC ACACTGATTG CCCAGCACAT ACCGTCTTGC CAGTTTCTTC TTTTCTCCCA 120  
 GTCTCCTGTT CATCCATTCT GTTCTCCCTT GGGGTGGGAA TCTATGATGG AGGTTACTGG 180  
 5 GGAACAGCT CAGCAGATT TTGGAGACCA AACCAAAGGT CTCACTAGGA AATTATCTG 240  
 TTTTAAACA TTGCTTCCTT CCTGGCTCTG CTAAATTGAA TGCTCATN 288

SEQ ID NO:4246

SEQUENCE LENGTH:333

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05047

SEQUENCE DESCRIPTION:

15 GATCTCTGCT CCTAACGATG AAGACTGGGC CTATTCACAG CAGCTCTCTG CCCTCAGTGG 60  
 TCAGGCGTGC AATTTTGGTC TCGCCACAT AACCATCTG AAGCTTTAG GCGTTGGAGA 120  
 GGAAGTTGGG GGAGTGTAG AACTGTTCC AATTAATGGG AGCTCTGTG TTGAGCGAGA 180  
 AGACGTACCA GCCCATTGG TGAAAGACAT TCGTAATAT TTTCAAGTGA GCCCGGAGTA 240  
 20 CTTCTCCATG CTTCTAGTCG GAAAAGACGG AAATGTCAA TCCTGGTATC CTTCCCAAT 300  
 GTGGTCCATG GTGATTGTGT ACGATTAAAT TGN 333

SEQ ID NO:4247

SEQUENCE LENGTH:288

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05051

SEQUENCE DESCRIPTION:

30 GATCCTCCAC AGAGAGGAGG GGACCAATTC TGGACAGACA GATGTTGGGA GGATACAGAG 60  
 GAGATGCCAC TTCTACTCA CCACTACCAG CCAGCCTCAG AAGGCCCCAG AGAGACCCTG 120  
 CAAGACCACG GAGGGAGCGA CACTTGAATG TAGAATAGGC AGGGGGCCCT GCCCACCCN 180  
 ATCCAGCCAG ACCCCACGNT GACCATGCGT CAGGGGNCTA GAGGTGGAGT TCTTAGCTAT 240  
 35 NCTTGGCTTT NAGAGCCAGC CTGGNTCTGN CCNCTCCNC CATGGGN 288

SEQ ID NO:4248

SEQUENCE LENGTH:170

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05052

SEQUENCE DESCRIPTION:

40 GATCTCTAAG TGACCACCAG GGGCTCTGAA CTGCAGCTGA TGTTATCAGC AGGCCATGCA 60  
 TCCTGCTGCC AAGGGTGGAC ACGGCTGCAG ACTTCTGGGG GAATTGTCGC CTCCTGCTCT 120  
 TTTGTTACTG AGTGAGATAA GGTGTTCAA TAAAGACTTT TATCCCCAAA 170

SEQ ID NO:4249

SEQUENCE LENGTH:136

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

# EP 0 679 716 A1

CLONE:HUMGS05053

SEQUENCE DESCRIPTION:

GATCTACATA GATTTGGAAA CTGTTTTCCT CTGTTTGGT CTCTGGGCA ACATTTTGG 60  
 CCCAAGTTG GGCAACATT GGCCCAAGT TGGGCATTT GGCAGTAGCT GTATGGNAGA 120  
 AAAAGAGTAA GAGGAN 136

SEQ ID NO:4250

SEQUENCE LENGTH:100

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05054

SEQUENCE DESCRIPTION:

GATCNTTTGC TTAGNGTGT AAAGTNTGTC TCTGAACAGA ATTATTTGTA AAAGTTAGGA 60  
 GTTCTTTTTT AAATCATTA AAGAGGCTTG NTGAAGGAAA 100

SEQ ID NO:4251

SEQUENCE LENGTH:204

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05055

SEQUENCE DESCRIPTION:

GATCCTAGAG CCCTTCACTT CGGNTTACTC CCTCTTTTT GCCTCTNTT NTAGTTGGA 60  
 AGAAATAAAC TCACAAATTA TGGTGCAGTA ATTNCCGGG GAAAGTAAAG CCTCAGGAAT 120  
 GCCCAGCCT TTTTCCAAA GCCTTNTCT CTGAGACCTC TTAAGTTCTA AGATTAATG 180  
 CCCCTCGCTG TTTCTCCTCT GAAA 204

SEQ ID NO:4252

SEQUENCE LENGTH:310

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05056

SEQUENCE DESCRIPTION:

GATCAAGGAG CAATTATGAA GGTCTACAAG CAAGANCAAG AGGAAGAATT ATNGAAAAAG 60  
 TTGGCAATG NCCCAGATG GAAGAGATAC AGGAGATGGA TGAAGATGA AGGGCCTGGG 120  
 CGGTAAACAT TTGTGGATGA CTGANGATTG ATGGAATGCT ACTATGCCAA ACCTTAATTG 180  
 TGATATTATT TTCATAACTG ANTTATTTTA GAAATGTATC ANINGACTGC TGCTCAGCAG 240  
 TAACTAAAT TCCTCAAGTA TTTGATTAAA CAGATTAATG TCAAANTTA AACCTTCCCT 300  
 TAAACTTTN 310

SEQ ID NO:4253

SEQUENCE LENGTH:267

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05058

SEQUENCE DESCRIPTION:

EP 0 679 716 A1

GATCTAATTG CATTGGTTAA AAGCAGCTAA CCAGGTCTTT AGAATATGCT CTAGCCAAGT 60  
CTAACTTTAT TTAGACGCTG TAGATGGACA AGCTTGATTG TTGGAACCAA AATGGGAACA 120  
TTAAACAAAC ATCAGAGCCC TCACTAATAA CATTGCTGTC AAGTGTAGAT TCCCCCCTTC 180  
AAAAAAGCT TGTGACCATT TTGTATGGCT TGTCTGGAAA CTTCTGTAAA TCTTATGTTT 240  
TAGTAAAATA TTTTGTGTA TTCTAAA 267

SEQ ID NO:4254

SEQUENCE LENGTH:307

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05059

SEQUENCE DESCRIPTION:

GATCANAAC CAAACGGGCC GGNNTTCTA AGGTGTNGGT ATGTGGGGAG TGGTACAAAA 60  
TGGTCTGATG CTCCTTCAA AACATTCAC TTTTACAACG TCAAGGAATT AAGCATAAAA 120  
AAGATTGGTT AAAAGCTTTG GTTCTAGTA AAGGTTAGTG TGTGTGGTTT TTTAAGAAG 180  
CTGTNTTGT AAATNATTTT TACTTGAAT GTTCAAACA GATTCAGGC TGCAAACTTG 240  
TTNATAATC GTNNGCTTCT CCAAGTGAAG CTTCAGGAAT ACCTGGAAAA TAGCTGTAAC 300  
GTTCCGN 307

SEQ ID NO:4255

SEQUENCE LENGTH:297

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05060

SEQUENCE DESCRIPTION:

GATCTAATAA AAATTGAAAT ATGCCTTTTA GAATGGCTTT CAAAGATAAC AAATGCTGGA 60  
GAGGATGTAG AACAACGGGA ACCTCTCGGT TATTGCTGGT GAGACAGCCG CTTTGAAAAA 120  
GTTTGAGTTT CTTACAAAAT TAAACTTACA CTTACACTTA CCATATGACC CAAAAATTCC 180  
ACTGCTTGCT CTTTACTCAA GTATAAGGAA AATCTATGTA CACACAAAAC TNGTACGTGA 240  
ATATTTATTA ATAGTCATTT TATGCCCAA ACTAGNAATA GTCCAATGT TCTGGGN 297

SEQ ID NO:4256

SEQUENCE LENGTH:208

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05061

SEQUENCE DESCRIPTION:

GATCTNTATT NTTTTNGCA CAGACTTCAA GTGGTCCCTC TTTTTCCT ACACACTCAG 60  
CTCTTCTCTA AAAGCAAGGA TTTGGAATGA NCAATTCAGT TTGACAGAAA AAGCTGAATA 120  
AAATGGCATC TGTAAATTGAN TTGTTGGAAA TGCCTTTTGN GCTCCTAAAT NTTAAACATC 180  
ATTAATAAAA TANTGTTTCA CAAAGAAA 208

SEQ ID NO:4257

SEQUENCE LENGTH:208

SEQUENCE TYPE:nucleic acid

EP 0 679 716 A1

TOPOLOGY:linear

CLONE:HUMGS05062

SEQUENCE DESCRIPTION:

GATCACAGGA AGACTTTGTA AGGACAGTTT AAGTTCTCCT GCAAGGTTTA ATTTGTTATC 60  
ATGTAAATAT TCCAAAGCAG GNTGCCCTGT GGTTTTGGCC AGCCTTGTGC TATGTTGATA 120  
AGATTGATTT ACTGCTTAAA ATCACTTTAC TTTATCCAAT TTTTACTGAA CTTTTTATGT 180  
AAAAAAATAA AATCAATTAAGAACAAA 208

SEQ ID NO:4258

SEQUENCE LENGTH:126

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05063

SEQUENCE DESCRIPTION:

GATCAGTTTT CTATTTTAAT GTGTAAAAA AATAACTTGT CGTATCCCAT TTAAAGGCCA 60  
ATTTCTGTAT TCAGGCAGGC ATATGTACAT ACATGAATAA AGCCAACAAA AGTGTGCACA 120  
TGTAATA 126

SEQ ID NO:4259

SEQUENCE LENGTH:552

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05064

SEQUENCE DESCRIPTION:

GATCGGGGTG CCCCTCAGCC TTCAGACACT CTGAGCCCCA GANGCAGCAA AGGGTGAGCC 60  
TCCTGCCTTG GTTCTACCA CCATCTGGTG GTCAATGGCG GGACTGCAGT CGGCCAGGGA 120  
CTGCGGTTGA CCTACACCTT CCTCCCTGA GACATCAGCT GGCATGCCTC CAAGCCCTCT 180  
GCGCATGCCC TCATTCTCTC CTGCCCCCTG GCTGACTTGT CATGTTGACT TGAACCCCTC 240  
TGGGGAATCT NTGTGCATGT CCACAGCCCC TGGTTATGCT CTCACAGCCA CTGCCCCNT 300  
CTNTGTTTCTG GCTGAGCTGG CTGACCGACC CAATCCCNCT AACCAGGCTC TGCCCGNTGA 360  
NCCGGTGGTT GAGAAGCCCG AAGTCTNAGG GGGCCAGCAA GGGCCCAACC NCAAGGNAGG 420  
CAATTGCTTG CNGGACCCCA AGGGGNCNGN TNGCCAATGG GGGTGNACTT TGCCGGGCCA 480  
AAGGGGNTNN GAATTTCCGG CNCTTAAGTN GTNACCCTTC AANANNAANG GGGCAAACGG 540  
GTTTNGNAAA AN 552

SEQ ID NO:4260

SEQUENCE LENGTH:180

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05065

SEQUENCE DESCRIPTION:

GATCAGACCT TCTTGGGGTC TTCTGGCCAG AGCTTGTCAC CAGCCCCATG GCCTCTCCAG 60  
GCGTGCTCAT GCCCAACACC CGCGGCCAGC CCCACGTGGT GCCGCTCAGC CTTCTCTGCC 120  
CCTCCTGGGA ATCTGTCATT CGTGGGTGCT TCAGAGTAAA ATCAATGAGT TTCTGAGAAA 180

EP 0 679 716 A1

SEQ ID NO:4261

SEQUENCE LENGTH:553

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05066

SEQUENCE DESCRIPTION:

GATCAGCGTG CGGGGTGTGA AGATAGGCGT CAAGGCCGAT GACTCCCAGG AGGCCAAGGG 60  
 GAATAAATGT AGCCACTTTT TCCAGTTAAA AAACATCTCT TTCTGCCGAT ATCATCCAAA 120  
 GAACAACAAG TACTTTGGGT TCATCACCAA GCACCCCGCC GACCACCGGT TTGCCTGCCA 180  
 CGTCTTTGTG TCTGAAGACT CCACCAAAGC CCTGGCAGAG TCCGTGGGGA GAGCATTCCA 240  
 GCAGTTCTAC AAGCAGTTTG TGGAGTACAC CTGCCCCACA GAAGATATCT ACCTGGAGTA 300  
 GCTGTGCAGC CCCGNCCTTC TTGGGGTCCC CCCAGCCCCT NAGGGCCAAG TTGCCAGGGA 360  
 CAAGCTTGGC TTGCTGGACA AGGGATGTTG GCAACTTGNT TTNAGGGAGG GGGGCAACTT 420  
 GNCCAACCGG CCANNNGGNN CAAAGGGAAA GTTNGGGGGG NCCCGTTTGG NCCAANGGGT 480  
 TAGGGGGAAG GGGTTGGGGG GNAATTNGGG GNGGGNGGGG AAATTNCNA GTTTTANTTG 540  
 TTAATTTTTT AAA 553

SEQ ID NO:4262

SEQUENCE LENGTH:314

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05068

SEQUENCE DESCRIPTION:

GATCTCCCGG ACCCCTGAGG TCANATGCGT GGTGGTGGAC GTGAGCCACG AAGACCCTGA 60  
 GGTCAAGTTC AACTGGTACG TGGACGGCGT GGAGGTGCAT AATGCCAAGA CAAAGCCGCG 120  
 GGAGGAGCAG TACAACAGCA CGTACCGTGN GGTCAAGCGTC CTCACCGTCC TGCACCAGGA 180  
 CTGGCTGAAT NGCAAGGAGT ACAAGTGNA AAGTCTCCAAC ANAGCCCTCC CAGCCCCCAT 240  
 CGNGAAAACC ATCTCCAAAG CCAAAGGGCA GCCCCGAGAA CCACAGGTGT ACACCCTGCC 300  
 CNCATCCCGN GACN 314

SEQ ID NO:4263

SEQUENCE LENGTH:176

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05069

SEQUENCE DESCRIPTION:

GATCCAGGGA ACAATGACTA TAGGTGAGCA GATGCTTTAA ATTAAGGAAA GATGGAGAAG 60  
 AAGCCAACTA GGAAATTAGA GAACACAGCA AGCAAAGAGA AGCAAGCGAG TCCCCTTGAG 120  
 TGATGCCAAT ACTTTTTTTT TTTTTTTTNG NGANANATTT TNTNCCANT NTGGTN 176

SEQ ID NO:4264

SEQUENCE LENGTH:389

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05070

## SEQUENCE DESCRIPTION:

GATCTTTNAG GAAAGACGGA TTGCNTTAGA AATAGACAGT ATATTTTNG TCACAAGAGC 60  
 CCAGCAGGGC CTCAAAGTTG GGGCAGGCTG GCTGGCCCGT NATGTTCTC AAAAGCACCC 120  
 TTGACGTCAA GTNTCCTTCC CCTTTCCCA CTCCTGGCT CTCAGAAGGT ATTCCTTNG 180  
 TNTACAGTGT GTAAAGTGTA AATCCTTTTC NTTATAAAC TTTAGAGTAG CATGAGAGAA 240  
 TTGTATCATT TGAACAATA GGCTTCAGCA TATTNTAGC AATCCATGTT AGTTTGNAC 300  
 TTTCTGTTG CCACAACCCC TGTTTTAAT ACTGTACCT TANTTAAAT TCNNGGTTN 360  
 TAGTTTTTG CAACAGGTTT TTTCCCAA 389

SEQ ID NO:4265

SEQUENCE LENGTH:436

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05071

## SEQUENCE DESCRIPTION:

GATCACCATG AAAGAAGAAT AGTTTTTGT CCCAGAGAC ATTCATTTAG TTGATATAAT 60  
 CCTACCAGAA GGAAGCACT AAGAAACACT CGTTTGTGT TTTAAAGGC AACAGACTTA 120  
 AAGTTGTCCT CAGCCAAGGA AAAATGATAC TGCAACTTTA AAATTTAAAG TATCTTGAC 180  
 TGATAAATAT ATTTAANANT TGTATGTTA TAAAGTTATT AATTTGTTNN GNCNGTGTTA 240  
 CAAAATGTTT AGTTTATATT GTTTTAGATT GTTTTGAAT TTTAAAGGT GTAAAATAAC 300  
 ATATTTNTCC TTTATGGNNA TCTATAAAC TTTCTGGTAG TAAATGTTT TCATTTTAC 360  
 TGGGTATATT ATTTGCTTC ATGNTTTTG TNNCNTCCA TAAGGNTTN NTGCCAGNTT 420  
 TTTTTTTNN CAGGNN 436

SEQ ID NO:4266

SEQUENCE LENGTH:533

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05073

## SEQUENCE DESCRIPTION:

GATCTGTCCC CATCCGAAGA GGCTTTGTGA ACTGCCTGCT GAATGGAAGG AAAGCAACTT 60  
 TAAACATTT AGAGTTTTC TGAGTATAGC CAAATGCCTG TNCTGAACT TATAGGAAAT 120  
 TGGAATTTG TTTAAATTT TACACTTAA GGTAGCAAAT GTCAATTATT NGNCCGAGCA 180  
 TATTGTGAAG AATTAACTA AAATTAATAC GTACAGTTT CTCTAATTAG GTGACTGTT 240  
 ATAATGGGTA TATTTGGAAT TTAGAAGAAA TAATTTGTA GNACTTGTGG CCCTTATGTT 300  
 TAACAGATTA ATTCAGCATT GCGTATTTN CTTGTCCCA ATACAAGGAT GCCAAAGGAG 360  
 GGAAACAGGA AAAATTGCCG TCCCATTTT AAAAATTTA GGGGTTTGGN TGGTTTAAA 420  
 CCCNTAAAT TGTTTCCAN GGANCNTTT TTTGGGGACC TTNCTAAAT TTTGGGGGN 480  
 CATTTTNAAN TTAAAGGNAT TGNNGGNNC NAAGGNGTN TTTGANTTN TGN 533

SEQ ID NO:4267

SEQUENCE LENGTH:124

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05074



## SEQUENCE DESCRIPTION:

GATCAAGGAA GAGATGGAGG CTTTCCCCGA AAAGTTCTAG CTGAGTGGCA GAAAGTGAGAA 60  
 TTTGTAAACT TATGTACAAT GTACGTGTAA ATAAATGGAT TGAATTCAG TTTGTCATCA 120  
 GAAA 124

SEQ ID NO:4268

SEQUENCE LENGTH:451

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05075

## SEQUENCE DESCRIPTION:

GATCTGGGAC AGATTCTACT CTCACCATCA CCAACCTGCA GCCTGAAGAT TTTCCAAC TN 60  
 ATTACTGCCA ACAGTATGAT AGTTACCCGC TCACTTTCGG CGGAGGGACC AAGGTGGAGG 120  
 TCAATCGANC TGTGGCTGCA CCATCTNTNT TCATCTTCCC GCCATCTGAT GAGCAGTTGA 180  
 AATCTGGAAC TGCCTCTNTT GTGTGCCTGC TGAATAACTT CTATCCCAGA GAGGCCAAAG 240  
 TACAGTGGAA GGTGGATAAC GCCCTCCAAT CGGGTAACTC CCAGGAGAGT NTCACAGAGC 300  
 AGGACAGCAA GGACAGCACC TACAGNCTCA GCAGCACCC T GACGNTNAG CAAAGCAGNC 360  
 TACNGAAAC ACANAGTNTA CGGCTGCGAA GTTNACCCCN TCAAGGGCCT TGAGCTTNGN 420  
 CCNGTCACAA AGGNGNTT N AACAGGNGG N 451

SEQ ID NO:4269

SEQUENCE LENGTH:197

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05076

## SEQUENCE DESCRIPTION:

GATCTAGAAA CTGAGTTGTG GAGCTGACTC TAATCAAATG TGATGATTGG AATTAGACCA 60  
 TTTGGCCTTT GANCTTTCAT AGGAAAAATG ACCCAACANT TCTNAGCATG AGCTACCTCA 120  
 TCTCTAGAAG CTGGGATGGA CTTACTATTC TNGTNTATAT NGNAGATACT GAAAGGTGCT 180  
 ATGCTTCTNT NATTA TN 197

SEQ ID NO:4270

SEQUENCE LENGTH:69

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05077

## SEQUENCE DESCRIPTION:

GATCCCATCC CCTTGTCTGA ACTGGAGCCA TGGGCACAAA GGGCCCAGAT TAAAGTCTTT 60  
 ATCCTCAAA 69

SEQ ID NO:4271

SEQUENCE LENGTH:54

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05079

## SEQUENCE DESCRIPTION:

GATCTTGCCT CCCATCAGCC ATCTTTCTCC CAATAAATTT TTGTTTTGTG CAAA 54

5 SEQ ID NO:4272  
SEQUENCE LENGTH:103  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
10 CLONE:HUMGS05080

## SEQUENCE DESCRIPTION:

GATCTAACCA ATTNAATAT GANTTCATAC TCNAAAGTAT CAACAAAAAA ATGAAAAGAA 60  
ATAGCTGGTT TGGNTGTAAG AAATGGTGTA ATTAATGGNT TTN 103

15 SEQ ID NO:4273  
SEQUENCE LENGTH:449  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
20 CLONE:HUMGS05081

## SEQUENCE DESCRIPTION:

GATCACTGCT GGCCTACTCT GGTACGGGG ACACTGACGC CCGGGTCACC GCTGCCATAG 60  
CCAGTAACAT CTGGGCCGCC TACGACCGGA ACGGGAACCA AGCGTTTAAT GAAGACAATC 120  
25 TCAAATTCAT CCTCATGGAC TGCATGGAGG GCCGTGTAGC CATCACCCGA GTGGCCAACC 180  
TTCTGCTGTG TATGTATGCC AAGGAGACCG TGGGCTTTNN NNTNCTCAAG GCCAAGGCCC 240  
AGGCTTTGGT GCAGTACCTG GAGGAGCCCC TNACCCAAGT GCGGCATCT TAACGGCATT 300  
GGTGAAGCT GGGGGTCAGA AAAGAGAAAT GACCCATTG NGAGGGGCTG GGGGNCCTCC 360  
TAGGAAGAAC CTTTNTTAGG ACAATGGGGG GNAAGGGATG GGACTTTTNN TTTTTTCCC 420  
30 AAGNATTAAG ACTTNAACT CCCTGTAAA 449

SEQ ID NO:4274  
SEQUENCE LENGTH:247  
SEQUENCE TYPE:nucleic acid  
35 TOPOLOGY:linear  
CLONE:HUMGS05082

## SEQUENCE DESCRIPTION:

GATCTNCATA ANCAGGGTTC CTGAGCTCAC TGAAGAGACT ATTGTCCCTT AGGAAAAGCA 60  
40 TTTCCTGTGT NTCGTNAGCA TCTGGCTCCA GGACAGACCT TCAACTTCCA AATTGGATAC 120  
TGCTGCCAAG AAGTTGCTCT GAAGTNAGTT TCTATCATNC TNCTCTTTGA TTCAAAGCAC 180  
TGTTTCTCTC ACTGGGCCTC CAACCATGTC CCCTTCTCCT NAGCACCACA AATAATCAAA 240  
ACCCAAA 247

45 SEQ ID NO:4275  
SEQUENCE LENGTH:424  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
50 CLONE:HUMGS05083  
SEQUENCE DESCRIPTION:

55

EP 0 679 716 A1

5 GATCATTTC CAAGATTGGT TTCCTTGAG TTTTGCTAA AACAAATCTT AGTAGTTTG 60  
 CCGGTTTAAA ACAATCACA ATCGTAAATG CTAATATCC TAAGATATCT NACCTTTTNA 120  
 TTTCAGTTTA GCCATGTATT GTATGAGTGT ATTAGTCTAA GCAGTGAGAA TCTTTNCTAT 180  
 GCCTCTATT CAGCAAAAAG TAGAAGTATC AAATAAAANG GGCAACTTTT AAAATATTAA 240  
 GCCTGAAGAC TTCTAAAANG ACANGANACA TGGCCTAANT ANCCAACATA GGATTACAT 300  
 AGTANGTTTC AACTACCTT ATTACCAAAA GCAAACCACC TCTTACTTTT NNNCTACATT 360  
 TATCCATGTA TATCTNTNGT ATGCTGGTCT TTTNCTTTT NGCCAAANTC NANCATTTT 420  
 10 TGNN 424

SEQ ID NO:4276  
 SEQUENCE LENGTH:308  
 SEQUENCE TYPE:nucleic acid  
 15 TOPOLOGY:linear  
 CLONE:HUMGS05085

SEQUENCE DESCRIPTION:  
 20 GATCTAAAC TTCTGTTGCT TTTGCCATTC CAAAACCTTG TCTTTGCCAG AAAAGTGTG 60  
 GTAACATAA AGAAAATTAT ATATGANCAC GGCAGTTTGC ACTGTGTTG AGTAGAACGT 120  
 GTAAATGAAT TGTNCCACC TTTGTTTGC CAGTAAGTGA CTGGATTCTT GGCACATTTA 180  
 TGTTCACCA AGTAGAACAA GAAGATATTA TTNCTATTTA TCAAGCAAAA GGAATTTTAA 240  
 GATTTTNTT TTNCNTTAAA ACCAANTTGG GATTTTNNN TTTNNTTTN TTTGGGGGAA 300  
 25 AAGGNTTN 308

SEQ ID NO:4277  
 SEQUENCE LENGTH:374  
 SEQUENCE TYPE:nucleic acid  
 30 TOPOLOGY:linear  
 CLONE:HUMGS05086

SEQUENCE DESCRIPTION:  
 35 GATCGAGTCC GCCATGGAGA GGGACCGCTA CATGAGCCCC ATGGAGGCCC AGGAGTTTGG 60  
 CATCTTAGAC AAGGTTCTGG TCCACCTCC CCAGGACGGT GAGGATGAGC CCACGCTGGT 120  
 GCAGAAGGAG CCTGTAGAAG CAGCGCCGGC AGCAGAACCT GTCCAGCTA GCACCTGAGA 180  
 GCTGGGCCTC CTCTCCAGAN TCATGTGGAG GGGCCAGAGG CTGCCAGACC CCCAGCTGGG 240  
 CCCTGCTCAC CCCTTGTTC TGGGCTTGA GGGGCCNTT GAGGAACCTT TAATTGTCAG 300  
 40 GGGTGCCCGN TATGGACGGG GCATTNCAGC TGAGACACTG TGGATTTTAA ATTAATCTT 360  
 TTGTGGTCTT TAAA 374

SEQ ID NO:4278  
 SEQUENCE LENGTH:510  
 45 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05087

SEQUENCE DESCRIPTION:  
 50 GATCTGTGCT TTCCAGCTCA CCCCCACAC TCACTCCTGA GACCCCTGGC CTCCGGCGTC 60  
 ACNTCCAGCN TCTGTTCCCC TAGTAAGTGC CTTCCATGTC GGCTCTAAC CCCAGGCCCC 120  
 GAGGACCCAG ACCCAGTGGG GAGGCGGACG TTCCAGCCGG CATGGNTGGG AACTGCAGAC 180

55

EP 0 679 716 A1

CTGTCTCCT GGTGGGTCCA GGGGCCCCCTC CAGCTTGTGG AGCCCCACAN TGGGGTGCCG 240  
 CCTGCCCGTT TTTTCCCAT GGAGCCCCAG CCCCCTTTGG GCCCAGGGAC ACCAGCCAGG 300  
 CTCTGTGCTG ACCCTCCTGT TGCACCCAGN CCTGGTNTCA GCAGCGACCA CCCCCTGCNT 360  
 TCACCCTTTG GAGCTTTTGC AATGTTTCCA NTAAANCCCN GGGNTGGGTT NGGNAAGGTT 420  
 GGGAGGTTGT TAAGTTGTT TNGGTGNNCT TTTTGAAAGG GGNAGGATNA ATTAACCTTG 480  
 ANCCNNTGGG GCGGNGNGNC TTTTNGGNTN 510

SEQ ID NO:4279

SEQUENCE LENGTH:466

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05088

SEQUENCE DESCRIPTION:

GATCTAGCTT GGAGAGCTTG TGAATCTTAG GAGAGCTAGG CATAGAATGA CTAAAGTTTG 60  
 TCACCGCATG AGATAAAATA AATGAAAAGC CACTTCTGGA GGAATGAGG CAGTCTGCCT 120  
 TTNTTGGAGA GATACATATT GTTGAACAGC TCTGGGCAGT TGATTGTTTG CCTGGGAGAG 180  
 CTAACCATGT TTACTCTACA CTTGACCTGT GATGGTCTGT ATTGATTGTN TCACACGCTT 240  
 AGCTTTCTAA GGCTAACCCAG GTCATCGTCC TCAGTCCCTG CCTGCAACTA GGTGCGCAAC 300  
 TGGCCCTTGA TTTCCACCC AACTTGTTC GTTTGGCCCTC AATCCTGGGG CCTCACTNAT 360  
 TTCCCCAAA NGATATGGTT TGGTACCACC TGATGTTTNC CTGTTGCATG GTTAAACCTG 420  
 ACTTTTTGGG GAAACTNAAA ATANAACANT TTTTCAAAC GGGAAA 466

SEQ ID NO:4280

SEQUENCE LENGTH:470

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05089

SEQUENCE DESCRIPTION:

GATCGAGCCA CTGCTGAAGA ATGTCTAAAG CACCCTGGT TGACACAGAG CAGTATTCAA 60  
 GAGCCTTCTT TCAGGATGGA AAAGGCACCTA GANGAAGCAA ATGCCCTCCA AGAAGGTCAT 120  
 TCTNTGCCTG ANATTAATTC GGATACCGAC AAATCAGAAA CCGAGGAATC CATTGTAACC 180  
 GAAGAGTTAA TTGTAGTTAC TTCATATACT CTAGGACAAT GCAGACAGTC TGAAAANGAG 240  
 AAAATGGNGC AAAAGGCCAT TTCCAAACGA TTAAATTTG AGGAACCTTT GCTACANGAN 300  
 ATTCCAGNG ATTTATCTA CTGAGCAATA TTTCCCTTN GAACTTCAAG ATTTCTNCAC 360  
 TGNANAATTN TTAATNTTN TTTTTTGGG GCCCTCTGGG CCAAATTGGN GNCATGTTCC 420  
 TTTGNAGGTG GGTAAACCA GTTNTCACT TNCACCAGTC CANNTNTTN 470

SEQ ID NO:4281

SEQUENCE LENGTH:476

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05090

SEQUENCE DESCRIPTION:

GATCTACAGT CACCATATAT ATCAGCAGGA CCTAAGGNAA AAGATTTTGG ATGTTGGGAA 60  
 AAGGTTAGAT GTGACTGGAT TTTGCATGAC AGGNAAGCCT GGTATAATCT GTGTGGAGGG 120

TTTCAAAGAG CACTGTGAGG NGTTCTGGCA CACAATTAGG TACCCCAATT GGAAGCACAT 180  
 TTCTGTAAAG CATGCTGAAA GCGTGGAGAC AGAAGGAAAT GGTGAGGACC TCGCCTTTN 240  
 CCATTCTTTT GAAGAGTTAC TCCTTGAGGC TCATGGTGAC TATGGATTAN GGAATGACTA 300  
 5 TCACATGANT CTGGGCCAAT TCTTAGAATT TNTCAAGNTG CACAAAATTT NAGGCATGTT 360  
 TTTTCCNGT TACTATTTTG GGTNTTNTNA AGCAAAAANT TTCAGNCTTC NTAAAAAGCG 420  
 GNTTAAAGGG GGNCTATTG NCCTGTNAAT TTTCCACTNA GGNCAAGTNT TTCTTN 476

10 SEQ ID NO:4282  
 SEQUENCE LENGTH:277  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05092

## SEQUENCE DESCRIPTION:

15 GATCTGAATT GTNCGAAAAG CAGCCAGTGC CTAANTTGTA GCTCCACTTA TGCCAACTGT 60  
 ATATATACCT CTCGTGAGCA TAGCAAGTNA TTTANTATTT TNAAGATG GCTAAATCC 120  
 TTTAATGAA CAGCACTAAA GTTATATGTA TTAGAGGAGA ATTATTGANT GANATGGAGA 180  
 20 AAGAGTTCTG AAATTANTAT TTNCATTTGG GCTTTTTTAC AGATAATATT ATATNNCTAA 240  
 GTGACCAGAC GAAAGAGAAG GNGTAGAAA AGGNTGN 277

25 SEQ ID NO:4283  
 SEQUENCE LENGTH:314  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05094

## SEQUENCE DESCRIPTION:

30 GATCCCCAGA CCTCACTTGC CTCTGCCTCC ATCTTGGCCC TGATTCAACC CTAAGATAAT 60  
 AGCACAAACA AATTCTNCAT AAAGATATTT TAATTCACCT GTNCCGTGCT ATATGGAGGA 120  
 GGCCAAGTCC ATTTAGTGAC ATTNCTNCCC ATAATGTGAG TGGGGAGGAT TGTGGGGAGG 180  
 AGGGGCTTTG GGTTCCTGTG TTTGTGCATA TGAAGGGAGA TGGGGGTTAG GTGGAGGAGG 240  
 35 AGAGCAGCGT GGTTAGCTAA GGTATTGCT TTTGTGGCA AATCTAATTA AATGACAGGA 300  
 ATCTCTTAC GAAA 314

40 SEQ ID NO:4284  
 SEQUENCE LENGTH:489  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05095

## SEQUENCE DESCRIPTION:

45 GATCTTCATG GAGCTGAATG ACGCCTGGTC GGAGTTTGAG AACCAGGGCT CNCGGCCCT 60  
 CTTCTGAGGC CGCAGTGGTG GTGGCTGCGC ACACAGCTCC ACAGTTGGG AGCCGTCGTG 120  
 GGACCTGGGT CCCACCGTN AGGACCCCGT GGGCGACAGA GGTGTGCCA GGGTGGGGCT 180  
 CCGAGCCCGG GGTACCGCC CGCCAGCGT TCCAGGCACA TGAAGAGAAA GCATTCCAAA 240  
 GCCTCTNATT GTTGTTCCT TTTNTCCTC CCGAAGAACA GCTGATTCAT GCTCCTCCCG 300  
 50 CAATTNTNAC GTCTGTAATT TATTTGGTGT TTCGGGCGTN GTCTCTTGA GCCCGGCAC 360  
 GTTNGTGGGG CCCACGGTTG CTTGGCGGTT CAATGGGGCC CTTGGTGTTT TGCACCGGAA 420

CTTTTGTAAG TCAAGTCCG TGGGTTGGTN TTGTTACAAG AATTNAAAAC TAATTTTCC 480  
CGNTTGAAA 489

5 SEQ ID NO:4285  
SEQUENCE LENGTH:292  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
10 CLONE:HUMGS05096  
SEQUENCE DESCRIPTION:  
GATCATATTT CCCCTTGGAC ACTTGGTTAG ACGCCTTCCA GGTCAGGATG CACATTTCTG 60  
GATTGTGGTT CCATGCAGCC TTGGGGCATT ATGGGTTCTT CCCCCACTTC CCCTCCAAGA 120  
CCCTGTGTTC ATTTGGTGTT CCTGGAAGCA GGTGCTACAA CATGTNAGGC ATTCGGGGAA 180  
15 GCTGCACATG TGCCACACAG TGAATTGGCC CCAGACGCAT AGACTGAGGT ATAAAGACAA 240  
GTATGAATAT TACTCTCAAA ATCTTTGTAT AAATAAATAT TTTTGGGGCA AA 292

20 SEQ ID NO:4286  
SEQUENCE LENGTH:173  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05099  
SEQUENCE DESCRIPTION:  
25 GATCCCAGTG GAGGCTGTAA CCCACCTGCC CCCGCACCAC CCCCNTGAC CCCTGTTACC 60  
GCATTGTGT GTATTAATGC TGAAGAATTA AATGTTTAAA GAGTTTAAAT TTTGAAGGCG 120  
TTTGCTATAT ACAGTTGTCC TGCATTATTA TAAAGAGTTT TCAGGAAGTT AAA 173

30 SEQ ID NO:4287  
SEQUENCE LENGTH:307  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
35 CLONE:HUMGS05100  
SEQUENCE DESCRIPTION:  
GATCAGAAAT GTGAAGCACA AATGCTGCTT CTCCCCCTCC TGTTCCCATG TCAGAGATGG 60  
AGAAGAAAGC ACAGTGAGCT GTTCACCAGT CCAGCGGTGA CCTCGGAGTC CTTGTAAACA 120  
GTGTTTCCAA TANTCTCTGC CAATAAACA GAATTNNGT TAGAACCTAT CTGCTGTCCC 180  
40 TCAACTAGTG TCTGATAGCT GAGAATGTAA TTCGTTNTN TGTCTATTAG AAAATTAGGC 240  
AGGCACCACA GACAGTAGCA ACATAAAGGA ACCTGCTTAG AAGNGGTTTT NATGGGNNNN 300  
NNCNCNN 307

45 SEQ ID NO:4288  
SEQUENCE LENGTH:244  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05102  
50 SEQUENCE DESCRIPTION:  
GATCCTTAAA TCTCCATTCT GTTTGTGGTT GCCCCCTCAA CCTCCCCTAC ACCCTTCCTA 60

55

TTCTTTTCA TTCTTCTGTC AGTCTGGGA GTAAAGCTCC CAGCATATTT AGATAATAGG 120  
 GCAGGGGAAG CACCCTCTTT CTTCTAGAC TGGATTATGC TCACATGCTC CCTTCCCCTG 180  
 ACATTTTGT AAATNCTGTG CCCTTTGCTG TAGCTACACT TCAGATTAAA GTAGGAGAAA 240  
 5 GAAA 244

SEQ ID NO:4289  
 SEQUENCE LENGTH:69  
 SEQUENCE TYPE:nucleic acid  
 10 TOPOLOGY:linear  
 CLONE:HUMGS05103  
 SEQUENCE DESCRIPTION:  
 GATCAAAGTT GGCAGGGGCT TGGCTGTGCC CTCAGATTCC GCACCAATAA AGCCTTCAAA 60  
 15 CTCCCTAAA 69

SEQ ID NO:4290  
 SEQUENCE LENGTH:341  
 SEQUENCE TYPE:nucleic acid  
 20 TOPOLOGY:linear  
 CLONE:HUMGS05104  
 SEQUENCE DESCRIPTION:  
 GATCTTTNAT CCTTTGTTGC AAAAGTGTGG AACTTTTNA NAGCTTGGCA GATTTNAACT 60  
 25 CCAGAAGCAC TTTATGAAAT GGTACACTGA CTAATCCAGA AGACATTCC AACAGTTTGC 120  
 CAGTGGTTCC TCACTACACT GGTACTGAAA GTNTAATTNN TTAGAGCCAA AAACTGGAG 180  
 AAACAAATAT CTGCCACCT CTAACAAGTA CATGAGTACT TGATTTTAAT GGTATAAGGC 240  
 AGAGCCTTTN NTTCTCTTC TTGATAGATG AGGCCATGGT GTAAATGGAA GTTCAGAGA 300  
 30 GGACAAAATA AACGGAATT CCATTTTTTT NTCAGTGTA A 341

SEQ ID NO:4291  
 SEQUENCE LENGTH:395  
 SEQUENCE TYPE:nucleic acid  
 35 TOPOLOGY:linear  
 CLONE:HUMGS05105  
 SEQUENCE DESCRIPTION:  
 GATCTTAGAG TCACTTTGGA ATAAGNTCTT ACATAAATAC CCCAGCCTT TTGAGAACGG 60  
 40 GGCTTGTTAA AGGACGCGTA TGTAGGGCCC GTACCTACTG GCAGTTGGGT TCAGGGAAAT 120  
 GGGATTGACT TGGCCTTCAG GCTCCTTTGG TCATAATTTT AAAATATGGG AGTAGAAAAC 180  
 AACANAGNNT GGAATGGACT CTTAAAACAA TGAAAGNGCA TTTATCGTTT GTCCCTTGAA 240  
 TGTAGAATTT TTTTGTGATT TCATAATTCT NCTGGTAAAT NTGNCAGTTA AAATGGTGCA 300  
 45 TTATGTATAT ATTANTATAA TTTAGANATT CCATTTTATA NTTNTTCCTA TTCCAGGGTN 360  
 GCATAANGCA TTTTNNANTT TNGGGGTTTT GGNTN 395

SEQ ID NO:4292  
 SEQUENCE LENGTH:349  
 SEQUENCE TYPE:nucleic acid  
 50 TOPOLOGY:linear  
 55

CLONE:HUMGS05106

SEQUENCE DESCRIPTION:

5 GATCATATTT TGCAGTTTGA GTAAAAGGGA AATATTGTGA TACATTTNTT AAATATACTT 60  
 CCCCCATGAN GTGAAAAGGT TAATTTTNC TANTGTTTGA AGTTGAAGTT ACTTCATGGA 120  
 TGTACATACC ATGANGTGCA TTTGGNTGAG ATAGCNGAAA TTTTTTTTGA AAAAGTTTAA 180  
 GTACCAAAGG TAGTCTAGTC TAGAACGATA AGTTAATACG TTTGGCTTT NNTAATTTGT 240  
 ACTGTAACAT CCTTATACTT TCTATTTNAA GTATATCTGT TCTTAAGTA AACAACTTAG 300  
 10 ATATTTTCCA CACCTTTTTT TTTTTTNCC CNTGNNGGGT CCNGGGTNN 349

SEQ ID NO:4293

SEQUENCE LENGTH:257

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05107

SEQUENCE DESCRIPTION:

20 GATCTGCCAT TTATTAGCTG TGGGATTTTG GGCAAATTN TTGACTTTCT GTGCTTCANT 60  
 TTTCTTAGCT GTAAAATTGG AAGAGTTGTT ATGAAAATNC ACTGAAAGTA TATTTGTATA 120  
 CATCATAGGA TAGTGTAGA ATATAGTATG GCTTTGAGAA ATGTTCAINA TTATNACTCC 180  
 CAGAGGAGTT TTAGGTATTA AGTGATGCCA AATATAATTT NTNAATTGTA TAATAAAAAAT 240  
 CTATATNCTT ACTGAAA 257

SEQ ID NO:4294

SEQUENCE LENGTH:212

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05108

SEQUENCE DESCRIPTION:

30 GATCACCATC CCAGTAACCT TCNAGTCGGG GGGCCAGCTT GGGGGCCAG AAGCTGCAAA 60  
 ATCCGATGAG ACTGCCGCCA AGTAAAGCCT TAGCCCGGAT GCCCACCCTT GCTGCCGCCA 120  
 35 CTGGCTGTGC CTCNCCGCTN ACCTGTGTGT TCTTTTATA CATTATCTT CTGTTTTNT 180  
 CAAATAAAGT TCAAAGCAAC CACCTGNANA AA 212

SEQ ID NO:4295

SEQUENCE LENGTH:559

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05109

SEQUENCE DESCRIPTION:

45 GATCCAGTGG GGATGTTGTN ATGACTCAGT CTCCACTCTC CCTGCCCCTN ACCCTTGGAC 60  
 AGCCGGCCTC CATCTCCTGC AGGTCTAGNC AAAGCCTCCT ATACAGGGAT GGAAACACGT 120  
 ACTTGANTTG GTATCAGCAG AGGCCAGGCC AACCTCCAAG GCGCCTCATT TATGAGGTTT 180  
 CTAAGCGGGA CTCTGGCGCC CCAGACAGAT TCAGCGGCAG TGGGTGAGCC ACTGATTTCA 240  
 50 CACTGACANT TAGCAGGGTG GAGGTTTGAC GATGTTGGGA TTTACTATTT GCATGCAAGG 300  
 AACACACTGG NCTCAGACGT TCGGCCAAGG GGACCAAAGG TGGNAAATTC GAACGAACCT 360  
 GTGGCCTTGC ACCNATCTTT TTTTCATCTT TNCCGNCATC TTGGTTGNGC AAGTTTGNA 420



EP 0 679 716 A1

ATNTTGGGAA CCTNGCCTCC TTTTGGTGN TGCCTTGNCT TGAAATAACT TNNTTATTCC 480  
CAAGAGGAGG GNCAAAANTTC AAGTTGGGAA GGTTGGTTTA ACCGGCNTTC CAATTCNGGG 540  
GNAANTCCCN TGGNGGGNN 559

SEQ ID NO:4296  
SEQUENCE LENGTH:50  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05110  
SEQUENCE DESCRIPTION:  
GATCTCTATG TATGTGTGTA TATAATATA GTTTTTTATC TATATATAAA 50

SEQ ID NO:4297  
SEQUENCE LENGTH:548  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05111  
SEQUENCE DESCRIPTION:  
GATCAAACGA ACTGTGGCTG CACCATCTTT NTTCATCTTC CCGCCATCTG ATGAGCAGTT 60  
GANATNTGGA ACTGCCTCTT TTGTNTGCCCT GCTGAATAAN TTCTATCCCA GAGAGGCCAA 120  
AGTACAGTGG AAGGTGGATA ACGCCCTCCA ATCGGGTAAC TCCCAGGAGA GTGTCAQAGA 180  
GCAGGACAGC AAGGACAGCA CCTACAGCNT NAGCAGCACC CTGACGCTGA GCAAAGCAGA 240  
CTACGAGANA CACAAAGTNT ACGNCTGCNA AGTCACCCAT CAGGGCCTGA GCTCGCCCGT 300  
CACAAAGAGC TTCAACAGGG GAGAGTTTAA AGANGGGAGA AGTGCCCCCN ANCTGGNTCC 360  
TCAGTTCCAG CNTGACCCTC TCCNATCCTT TGGCCTGTGA CCCTTTTTTT TCCACAGGGG 420  
GNCCTACCCN TTTTGGNGGT CCTCCAGCTC ATTTTTTTAA CCTTAACCCC GNTTNNTTCT 480  
TCCTTTGGGG TTAAATTAT TGNTTAATTT TTGGGGGNGG ATTGNTTTAA ATTAAAGGGA 540  
AINTTTTN 548

SEQ ID NO:4298  
SEQUENCE LENGTH:415  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05112  
SEQUENCE DESCRIPTION:  
GATCAGCGCC TGAGAAGTCG TCGGGCGATG TCCCCGCGCC GTGTCCCTCT CCAAGCNCCG 60  
CCCCTGGGTG GGCTCGGTGG AGCAGACCCC GCGCAAGAGG CTGCGGTGAG CCAATTTAGA 120  
GCCCCAAGAG CCCCAGGGA ACCTGCCGGG GCAGCGGACG TTGGAAGGGC GCTGGGCCTC 180  
GGNTGGNACC GTTCATGTAG CAGCAACCGG CGGCGNNTGC CCAGNAGCAG CGTTCGGTTT 240  
TTTTTTTAAA TTTTAAAAAC TGTGCAATGT ATTAATAACG TTTTTTTATA TCTAAATGGT 300  
ATTCTGCACG AGANGTACA CTGGGTCCCA AAGGTGTAAA AGCTTTTTAA GAGTCATTGT 360  
ATTATAAAAN TNNNTTAAAT CTNTTGGTTG AAATCTTNAAG GTGNNANAGT ATTNN 415

SEQ ID NO:4299  
SEQUENCE LENGTH:156

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05113

SEQUENCE DESCRIPTION:

GATCTAATCT NAGATGTAAA CATTCAAATT NACCCTGTAG ACTNGGGTGA CAAGTTTCGN 60  
TTGGTCATAG CTAGTACCTT GTATGANGAT GGTACCCTGG ATGATGGTGA ATACAACCCC 120  
ACTNATGATA GGCCTTCCAG GGCTGACCAG TTTNAN 156

SEQ ID NO:4300

SEQUENCE LENGTH:310

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05114

SEQUENCE DESCRIPTION:

GATCTTACTT TCATCCAGTC TAATAGGTTT GGAGATTAAA CCTTTNCTCA ACTTGTGCTG 60  
TTTATATAGC CAAGCTTCCG TCAATAAGGC TTCATTGTGA CTTAACAAA CATNATCTTC 120  
CCACATACCA GGAAGTATTG GACATTTATT TTACATGGGA AAAATTATTT GGAATAATAA 180  
AGCAGNACT TTNCCTGANG TTGCAATTTA TACTGTATGG CTNCTNNTTC ATGTTTCATC 240  
TAGGTTTTAN GAAGTGAAGT ATANGTAAAT NTNGGTTCTG TAAATNGTGA TGGCGCTGGN 300  
NATTACATGN 310

SEQ ID NO:4301

SEQUENCE LENGTH:231

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05115

SEQUENCE DESCRIPTION:

GATCACTCAA GCACAGGATT TTAAGACCAG CCTGGGCAAC ACAGTGAGTG AGACCCTGTC 60  
TCTACAAAAA AATTAATAAT TAGCTGGATA CTGTGGTGTG TGCCTGTAGT CCCAGGTACT 120  
TGGGGCATTG AGGCAAGAGG TTACTTTNAG CTCGGGTGTT TGAGGCTATG ATGAAGTATG 180  
ATTGTAGTGC TGTACTCCAG CCTGTGCAAA ANAGTAAAC CTTGTCTCAA A 231

SEQ ID NO:4302

SEQUENCE LENGTH:52

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05116

SEQUENCE DESCRIPTION:

GATCGGGCCA CTGCACTCCA GCATGGGTGA AAAAGTGAGA CCCTACCTCA AA 52

SEQ ID NO:4303

SEQUENCE LENGTH:419

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05117

# EP 0 679 716 A1

## SEQUENCE DESCRIPTION:

GATCACCAAC AGCCGTCCTC CCTGCGTCAT CCTGTGACTG CACAGGACTC TGGGTTCTGT 60  
 CTCTGTTCTG GGGTCCAAAC CTTGGTCTCC CTTTGGTCTT GCTGGGAGNT CCCCTGCCT 120  
 CTTTCCCCTA CTTAGCTCCT TAGCAAAGAG ACCCTGGCCT CCACTTTGCC CTTTGGGTAC 180  
 AAAGAAGGAA TAGAAGATTC CGTGGCCTTG GGGGCAGGAG AGAGACACTC TCCATGAACA 240  
 CTTCTCCAGC CACCTCATAC CCCCTTCCCA AGGGTAAGTG CCCACGAAAG CCCAGGTCCA 300  
 CTCTTNGNCT CGGGTAATAC CTGTCTNGNT GCCACAAGA TTTTATTNA TTCTCCCCTT 360  
 AACCCNAGGG CAATGTCANN NTATTGGCA GTAAAAGTGG GGGTTACAAA ANCACTAAA 419

SEQ ID NO:4304

SEQUENCE LENGTH:75

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05118

## SEQUENCE DESCRIPTION:

GATCTCCCTA GGGCCCCACC TGGACCATT TCCCTCCGTT TTATTTTGT AATTAAATTC 60  
 TTCCAAATT GAAA 75

SEQ ID NO:4305

SEQUENCE LENGTH:171

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05119

## SEQUENCE DESCRIPTION:

GATCTCAGTT CACTGCAACC TCCGCCTCCN AGGTTCAGGT GATTCCNTTG TCCCAGCTAC 60  
 TTGGGAGGCT GAGGCAGGAG AATCAGATGA GCCTGGGAGA TGGAGGTTGC AGTGAGCCGA 120  
 GATTGCACCA CTGCACTCCA GCCTGGGCAA CGAGCAAACC TGCNNCTCAA A 171

SEQ ID NO:4306

SEQUENCE LENGTH:309

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05120

## SEQUENCE DESCRIPTION:

GATCCCTGGT GTGTTGTGTG GGCCTCTTTA ACGTTTGCCA CTGAGCCTTA ACCTCACTGT 60  
 ACTTCACTGT ACTTCACAG CATTGGTGT AACATTTTAA TCTTAGAAGA CCCTGACCCA 120  
 CTGAGGGTTT GTTGTGAGAA TTGCTGAAGC CACGTAGAAG CACCTTGAAA TCTGTAAAAC 180  
 CACAAGAAAG TACTTTATAA AAGGTATCCT TATTTGAAGT GGATAAATCT TGTAACCTGA 240  
 AAAGTTGTGA TTTAGAAGAC AGGATTGTTT TTGAACATTA GGAATTAAG GCTATATCTG 300  
 GTCCTTAAA 309

SEQ ID NO:4307

SEQUENCE LENGTH:587

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05121

SEQUENCE DESCRIPTION:

5 GATCTAAAAA CTCATCTTTG GGGTAAAGAG TTAAGTGTCC AAAGGTTGTC ACAGTTCATG 60  
 AGGTCAGAGG GAGCTAGCCT GGCACCTGGA CTCTGCCCAT CCACAGCTGA CAGATTCCAA 120  
 CAGAAGTGTA TTAAATTCT CCAGTAGACA ATGCTGGGTA AGGGAGGGGN TAGNNCTGGG 180  
 TTATTAAGAT ACAGGCTGCT GTATTTTACA TTGGTTGTGG GGAAGGGGA GCCTGGAGAA 240  
 AACAAAGTCA CTATTCCTT TTTGAAACA GGAAGGAAA TTATTTTGTG TTCAGTAAAA 300  
 10 ATGGGTAGGN GAATTCCAAT GTCCTAGCC ACAAGGNC AGTTTCCACT GAGGAAGTGA 360  
 ACCAGTGGGG AACTCAAAAT TTCCAGGNAA CATTGGGGGG GAGGGGGAAA ANTTGGGCTT 420  
 TTCNCTTAAA TTTGGCAGNT NTTNCCAGT TGGGGNCNGG GNGGGGGGCT CCTGTTTTTT 480  
 TTTTGGGGG NTTGTGNTTA NTGNTNNTAT NGTACCGNT TATTTTGGC CCCGGGGTTT 540  
 15 TTCTGGGNT TTNTAAAGG TTNCCCAAA NTTTGGGTNA AAACNTN 587

SEQ ID NO:4308

SEQUENCE LENGTH:111

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05122

SEQUENCE DESCRIPTION:

20 GATCCCCCA TCTCTNCAGC ACTCTCTTGC TCCTCTCCCT TTTCATTTC TACTTTGTA 60  
 25 TCTTNTCAGA TTAGAACATA TTTTNTTGT CATGACAAAG GACTCTCCAA A 111

SEQ ID NO:4309

SEQUENCE LENGTH:311

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05123

SEQUENCE DESCRIPTION:

30 GATCTNAACT CCTTGGCTTC TTTACTTAGT TCAAGCCCCA GCCTAGGAAA GCCAGTTACA 60  
 35 TAAAGTTGG CTCAGGAGTC TTAGAGCTTT ACCTAAATAT GAGCCCAGAA AACGGAGGAT 120  
 GGGGGTGGGG CGCCTTCCTG GAGGTGACAC TTGATGGGGG TGTGTTCTGG TTAGTGTCT 180  
 AAGGCTGTGC CATCAGCTCC TTCCTCCCT GTTCATTCTG CATCTCTAG TCAGTTGGCT 240  
 AAGAAGTGAC TCTTGCAACT AAAAAATTA AGAAATTCAC TTCCCTCTA GGAGGTGATG 300  
 40 ATAGGGTTTT N 311

SEQ ID NO:4310

SEQUENCE LENGTH:366

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05124

SEQUENCE DESCRIPTION:

45 GATCAGAGTT TCTGTGGAAT TCTGTTTGT AAATCAAATT AGCTGGTCTC TGAATTAAGG 60  
 50 GGGAGACGAC CTTCTCTAAG ANGAACAGG TTCGCCCCAG TCCTCTGCC TGGAGACAGT 120  
 TGATGTGTC TGCAGAGCTC TTAGTCTCC AGCAACACTC TTCAGTNCAT AATAAGCTTA 180  
 ACTGATAAAC AGAATATNNA GAAAGGTGAG ACTTGGGCTT ACCATTGGGT TTAATCATA 240

GGGACCTAGG GCGAGGGTTC AGGGCTTCTN TGGAGCAGAT ATTGTCAAGT TCATGGCCTT 300  
 AGGTAGCATG TATCTGGTCT TAACTCTGAT TGTAGCAAAA GTTCTGAGAG NAGCTGAGCC 360  
 CTGTTN 366

5  
 SEQ ID NO:4311  
 SEQUENCE LENGTH:240  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 10  
 CLONE:HUMGS05127

SEQUENCE DESCRIPTION:  
 GATCACGCTG ACCTGGCAGC GGGATGGGGA GGAACAGACC CNGGACACAG AGCTTGTGGA 60  
 GACCAGGCCT GCAGGGGATG GAACCTTCCA GAAGTGGGCC GCTGTGGTGG TGCCTTCTGG 120  
 15  
 AGAGGAACAG AGATACACAT GCCATGGTGC AGCACGAGGG GCTNCCCCAG CCCNTNATCC 180  
 TGAGATGGGA GCAGTCTCCC CAGCCCACCA TCCCCATCGT GGGCATCGTT GCTGGCCTTN 240

20  
 SEQ ID NO:4312  
 SEQUENCE LENGTH:96  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05128

SEQUENCE DESCRIPTION:  
 25  
 GATCTTTTCT CCATCATGTA CTTAGTATTT CCCATTAACC TACACACTGA TTTTNTGCT 60  
 ACTCCTTGTA GAAACAAAAT INTGGNTGGA CTCAGN 96

30  
 SEQ ID NO:4313  
 SEQUENCE LENGTH:354  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05129

35  
 SEQUENCE DESCRIPTION:  
 GATCTGCTGG TCCTTGCAGG CAAAGCTACA GCCAGANTGT CCGTTTGANA CTCCTAGCTC 60  
 ATCTGTACC GAGCTTNATC CGAATGTGCC ACGGAGCTTN CTCTCCACTT CCTCCGTGCA 120  
 GCGGCCCTGC CACAGCCCTC CCTCGGCACA CTTTGACCCT TTGTAGGGTT GGNATTAGCA 180  
 GGACTCGGCT ATTTAAAGCA CCAGTCTGGG GTCGCCTGGG CCCCTGCTGA CCCNTTCCTN 240  
 40  
 CAGAGCAGCC AGCCCAGCCC GGGAAACAAGA CGGACTTNCT ATNCTTCGG ACTCACAGCC 300  
 TTTGAAGAGT CAAGCTNCAC TTNAAGCTCA CTCAGTAATA TCCTTCAAT GNGN 354

45  
 SEQ ID NO:4314  
 SEQUENCE LENGTH:161  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05130

50  
 SEQUENCE DESCRIPTION:  
 GATCCGCCAC TTTCGGCCGG AGCTCGAGGA GCGGATGCAG CGGTTTGCCC AGCAGCATCA 60  
 GGCCCGGCAG GCTGCCTCTT AGCCACCAC CCTGGCCTGC TGTCTGCGT CTATCCATGT 120

GGAATGCTGG ACAATAAAGC GAGTGCTGCC CACCCTCCAA A 161

SEQ ID NO:4315

SEQUENCE LENGTH:129

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05132

SEQUENCE DESCRIPTION:

GATCCTGGCT TTCAGGGTG GGCAAGGGCA AGGAGCAGGC TTGGAGCCAG GGACCAGTGG 60  
GGGCTGTAGG GTAAGCCCCT GAGCCTGGGA CCTACATGTG GTTTGCGTAA TAAACATTT 120  
GTATTTAAA 129

SEQ ID NO:4316

SEQUENCE LENGTH:227

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05133

SEQUENCE DESCRIPTION:

GATCTTTGAG GTGAACAACT TGCCTGTGGA ATCGTGGCAG TAACTGTTTC CACTCACAGC 60  
CTGAAATTCT CCTNTGTCCC AAACCCAGG GGGCCCCAGC AGCTTCGAAC CTACACCTGA 120  
GGGCTACCAG CAGGTGGCGC TNTGGCTTTG CACTGCAAAA ACTGGGGACC AGCCCNCTTC 180  
TNCCACAAAT AAAGCCCAAT AAAGCCTGAG AAGTGAGGAA AGCCAAA 227

SEQ ID NO:4317

SEQUENCE LENGTH:154

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05134

SEQUENCE DESCRIPTION:

GATCTCCGTG GATGAAGTGC GTCTGGACTC TTAGATTCAT AAAATATTTC AGGGTTTGGG 60  
AGTNACAGAC CCTCCCCTCT CCTCAGTGCA CTTTGGCATT TNCACGGTGT CTTCCCCGGA 120  
CAGCACAGCA ATAAATNGNG TGATTGCGTG GAAA 154

SEQ ID NO:4318

SEQUENCE LENGTH:181

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05135

SEQUENCE DESCRIPTION:

GATCAGGTTT GGNCTTCTCC CACTGAGCAT GACAAGCACT CGAAAGGCTA AATCAACCAG 60  
AAACATCGAA ACAAAGCTC AGTACGATGC CAACTNTTAA GCCTGCAGGA NTCCTCCTGG 120  
GTTGTCCCC CGGCACGNTC CACAGCTGGT NGACCCGGCA GTTCCTGGNT CCTTGTTTCA 180  
N 181

SEQ ID NO:4319

SEQUENCE LENGTH:315

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

5 CLONE:HUMGS05136

SEQUENCE DESCRIPTION:

GATCTGCCCT TGNTNGCCTC ATACCTCTGT GCTCCACACT GCGGCCAGGC CAGCTGAGTC 60  
 CCTCCATCCG TGGATGCTTT CCTGCAGCTA TGTGGTATGG GGGTCATTCC TGCCTCTTGG 120  
 10 CACCAGGTTG GGGGGCATGT GCTTGTGGG CACCAAAGTG ATGGAACCCT CAGGTGCTCT 180  
 CCGGGAGCCT GAACCTCCTG ACTGAGGAAC ATGGGCAGAA CATGTTTATT GCACAGAGTG 240  
 GGCCTGCGC ACAGGCGTGG CTGTACACGT GCTCTCAGCT CATCATCCTT TCCAGTAACT 300  
 TTAATAAAC ATCCN 315

15 SEQ ID NO:4320

SEQUENCE LENGTH:255

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

20 CLONE:HUMGS05137

SEQUENCE DESCRIPTION:

GATCGNGNNA CTTGGGNGN GGCCTAGGC ACTACCAGCA GCGCACGCTC ACCTTCGCCC 60  
 TCAGGGCTGA CGACCCCTG CTCAAGCTCT TGCAGGAGGC TCAGCAAAGC TGAATTAAC 120  
 CAGGCAGAAG AGCACAGATG TGTGGGATTG GGGGAGGAGT GGGGACAAGA TTTTNTATCT 180  
 25 CTAAGTGAAT TTTCTAAAAA TGTATTTTAT ACCGGCTTAT TCCTAGTATT GNATAAACTA 240  
 CGGGGNTCAN TCAAA 255

SEQ ID NO:4321

30 SEQUENCE LENGTH:212

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05138

SEQUENCE DESCRIPTION:

GATCAACAT GCATGGNTGG GTCCTACGC AGACACACCC ACAGAAGGAC ACTAGCCTGT 60  
 GCACGCGCGC GTCNATCTAC ACACACACAC AAGAGTTCAT AATGTGGTGA TGGCCCTAAG 120  
 TTAAGCAAAA TGCTTCTGCA CACAAAATC TCTGGTTTAC TTCAAATTAA CTCTATTTAA 180  
 ATAAAGTCTC TCTGACTTTT TGTGTCTTCA AA 212

40

SEQ ID NO:4322

SEQUENCE LENGTH:136

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

45 CLONE:HUMGS05139

SEQUENCE DESCRIPTION:

GATCGAGTTA TTATGATAAC TGTGGTAATT TGTGTGTATA AATAGCAGTA ACATAGGAAG 60  
 GTTTTGGTAA CTNCTGACAA GAAATTTNAT GTAGAGAGTT AATTCGAGC ACATTAATAA 120  
 50 GACTGTCCCA CTCAAA 136

55

SEQ ID NO:4323

SEQUENCE LENGTH:228

SEQUENCE TYPE:nucleic acid

5 TOPOLOGY:linear

CLONE:HUMGS05140

SEQUENCE DESCRIPTION:

10 GATCTGCATT ATTCTNGGAN AGTATTCAAG TGGTATCTTG ACTATTAAAC TACGTATAGT 60  
 GTTNTGNAA TAGAAAGAAA ACAGCATTGG AATTGGATTC ATGTATCGTG GGATACAGGT 120  
 GTTATTTTCAG GTGATGTACT TGCATTATTT TCITTAGCCA TAGTAACTTT TTGTCACAAT 180  
 AACTAAGTAT TCAATTATAT ATAANGAGTG AAACATTAAA ATGGNAAA 228

SEQ ID NO:4324

15 SEQUENCE LENGTH:297

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05141

20 SEQUENCE DESCRIPTION:

GATCCTGCCA CTGCACCTCA GGCTGGGCAA CAGAGTGAGA CCATGTCTCA AAAAATAAAA 60  
 ATAAATAAAA ATAATATCAG GNTGCATACA TCAGAGGCTG TTCCTAGTGT AAAGGCACTT 120  
 TGGAGGGAGA AGACTTTCAG AGTTAGGCAG ACCAACTAAG AGGTCAGCTG ANGCACCTAA 180  
 CCAGTTGTAA GGAGGTGAAA GACAGCACCC CAAGANGAGA TGTGCAGGAN GGAGGAAAGA 240  
 25 GGCTTGGTCA TAAAGGNTGG AGGAATTCCA AAGTGACACT GANACAGGCT GCGTTN 297

SEQ ID NO:4325

SEQUENCE LENGTH:90

30 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05142

SEQUENCE DESCRIPTION:

35 GATCGTTCTG CTGAGTATGT TAAGCTCTTT ATGACTGTTT TTGTAGTGGT ATAGAGTACT 60  
 GCAGAATACA GTAAGCTGCT CTATTGTAAA 90

SEQ ID NO:4326

SEQUENCE LENGTH:411

40 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05143

SEQUENCE DESCRIPTION:

45 GATCTGCTGC TGCCATTTTA ATCTTGCTCA TTAACCTTAC TCCTTTGAGA ATTCTTTAAC 60  
 AATATTTAAA ATTGGTAACA AAAATAGTTT AGCCATAATT GTTTAGCCAT GTGAGTTTCA 120  
 GGTTGGTACA CGTTCAGACA GAACTGCTGT ATCACATTCC AATTTTGAAT AGCCAGTGAG 180  
 CAATCAAGTG TAGAGAAATG ATAAATGGCC TAAGAAGGCA TACAGTGGCA TAAACGATGC 240  
 TCTTCCTAGT AGCTTAATAG GCCACAAGCT AGTTTCTGTT GCACTCTGAA ATAAATATG 300  
 50 CTTTAAAAAT GTAGGGANCA GTGCTTAGAA AAGCAAAAAC TAGGTGTGTC ATTGANATAA 360  
 TAGGCATAAN ACTTAAATGT TCCATAGGCC ACTATTTGGA AGGGGGCCTT N 411

55



SEQ ID NO:4327

SEQUENCE LENGTH:99

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05144

SEQUENCE DESCRIPTION:

GATCTACACA TTTTATAGT CATTAAAAAT TGTATGACTC TGTCAAATNA TTAAAGTAAT 60  
TTGGTGGAT TTTAAAAAT AAAAAATAA AAATAGAAA 99

SEQ ID NO:4328

SEQUENCE LENGTH:80

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05145

SEQUENCE DESCRIPTION:

GATCAGTTTT TATAGCATCT ATGGACATAG AAAATCAGTC ACTGAAAAA ATAAACACAG 60  
CTTCAATGT CTCACATAA 80

SEQ ID NO:4329

SEQUENCE LENGTH:263

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05147

SEQUENCE DESCRIPTION:

GATCCAGAA CACCAAGACC TCCAGCCCTG GATGATGCCT TTTCCATCCT GGAATTATTC 60  
CTGGGACGTT GGTCCGGTC CCGGTAGCCT TGTTAACCCT CAGAGGCCTT CAAGTCCTTT 120  
CCACNTNCA CCCATTGCCC ACCATTAANA AGCTTAGCTG NNTCTTGCCA CCTCAGGGGC 180  
TTGGATATGT GGAATAGTGA ACTGGGNCCA TGTCAGTTTG TCACTNACCC AAACGACCA 240  
ATAAACCTN NATTTATGNT AAA 263

SEQ ID NO:4330

SEQUENCE LENGTH:111

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05148

SEQUENCE DESCRIPTION:

GATCCTAANN CTGACAAGAT TCAAAGNACT AAATTTAATT CAGTCATNAA CACTACCAAT 60  
TACCGTTTAT NGGTAGACAT CTTTGGAAT TTCCACAAGA GCAAGCTAGG N 111

SEQ ID NO:4331

SEQUENCE LENGTH:264

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05149

## SEQUENCE DESCRIPTION:

GATCTGACCT GTTTATTGTT GGCCTTGT GAAAACGAGC TTTCTTTCCC ATGATAGTGC 60  
 TTCGTTTTTG AAGTGTGAA GCTGTGCTCC CCTNAAATCG TGGCAGGAGA GATTAAGGTA 120  
 ATTACAACAC TCAGTTCTAT GTCTTACAAG CACTTTGTCT TGTCTCTGCA AGAAAATTCG 180  
 ATNCCNGTCA TNTCCATAA AATACAGNCA TTTTACCANC ATANTATGCT TTGATTGANG 240  
 CAGCANTATG CTTTGGGCA GTAN 264

SEQ ID NO:4332

SEQUENCE LENGTH:259

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05150

## SEQUENCE DESCRIPTION:

GATCCTCCCG CTCAGCCTC CCAAGTAGCT GGNATTATAG GTGTGTGCCA CTGTGCCAAG 60  
 CTAATTTTTT AATTTTNGT AGAGATGNGA TTNACCATG TNACTCAGGC TGGTCTCAA 120  
 CTCCAGCCT CAAGCNATGC TCCCACCTCC ACCTCCCAA GTGCTGGGAT TACAGGCGTG 180  
 AGCACCATAC CTGGCGCATG CATATTTT N AAGAGTACCC ACTGGNGTCT AATATATAGC 240  
 CTGGGNTACC TGGGATGAN 259

SEQ ID NO:4333

SEQUENCE LENGTH:250

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05151

## SEQUENCE DESCRIPTION:

GATCTAACCA ATTTGAATAT GACTTCCTAC TCCAACGTAT CACCAAAACA CTGAAAAGCA 60  
 ATAGCTGGTT TGGTTGTTAG AAATGGTGTA ATTAATGGTT TTNGTTAGTT CACTTCAGCT 120  
 TAATAAGTAT TTATNGCATA TTTGCTATGT CCTCAGTGTA CCACTACTTA GAGATATGTA 180  
 TCATAAAAT AAAATCTGTA AACCATAGGT AATGATTATA TAAAATACAT AATATTTTTC 240  
 AATTTTGAAA 250

SEQ ID NO:4334

SEQUENCE LENGTH:260

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05152

## SEQUENCE DESCRIPTION:

GATCGCATTT ATATAACATT CTTGAGGTGA CAAAATTATT GAAATGAAGA ACAGATTAAT 60  
 GGTGCCAGG GATAGGGACT GGAGGGGGTG TGGGGTATGT ATGACTATAA AGGGATGACG 120  
 CAAGGAGTTC CTTTGTGCTG ATGGAACAGT TCTATATGAT TATGATGATT ACGATGTTGA 180  
 TTATAACATT TGATTATGAG GTTAAGCACA TGAGTCTTTA CCTGTNCTGA AGTTGTATGG 240  
 ACCTACATAC ACACAAATGN 260

SEQ ID NO:4335

SEQUENCE LENGTH:261

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05153

SEQUENCE DESCRIPTION:

5 GATCAAGACG AGCCTGCACC GCCTGAAGCC CGACACGGTG CCAGCGCCCT GCTGCGTGCC 60  
CGCCAGCTAC AATCCCATGG TGCTCATTCA AAAGACCGAC ACCGGGGTGT CGCTCCAGAC 120  
CTATGATGAC TTGTTAGCCA AAGACTGCCA CTGCATATGA GCAGTCCTGG TCCTTCCACT 180  
10 GTGCACCTGC GCGGGGGAGG CGACCTCAGT TGTCTGCCC TGTGGAATGG GCTCAAGGTT 240  
CCTGAGACAC CCGATTNCTG N 261

SEQ ID NO:4336

SEQUENCE LENGTH:145

15 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05155

SEQUENCE DESCRIPTION:

20 GATCCTCAGT AAACCTCTGAG AAATAATGAA TGTGGTTGT TTTAAATGG TAAATNTGA 60  
GGTATTATGT TATGTGGCAA TAGATAGCTA ATATATAACT NATTTGANTC AAACAATATG 120  
TTAANTTAAA GCNCAGAAGA NTAAA 145

SEQ ID NO:4337

25 SEQUENCE LENGTH:264

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05157

30 SEQUENCE DESCRIPTION:

GATCTAAGGA AAGAAATGGA GCAACTAGTG CTTGACAAAA AGCAAGAGGA GACAGCCGTA 60  
CTGGAAGAGG ATTCTGCAGA TTGGGAAAAA GAACTGCAGC AGGAACTTCA AGAATATGAA 120  
GTGGTGACAG AATCTGAAAA ACGAGATGNN AACTGGGATA AGGAAATAGA GAAAATGCTT 180  
35 CAAGAGGAAA ATTAGCTGTT CCTGAAATAG AAGAATAATC CTTAACAGTC TGCAAACCTGA 240  
CATTAAATTC TAGATGTTGA CAAA 264

SEQ ID NO:4338

SEQUENCE LENGTH:109

40 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05158

SEQUENCE DESCRIPTION:

45 GATCGGGGCG GGGAAACAGC NGGAAGANGG NCGCACCCGG TCTGACTACA ACANCCAGAA 60  
AGAGTCCACT CGGCACGTGG TCCNGCGCGT GAGGGGGGGT GTCTAAGTN 109

SEQ ID NO:4339

SEQUENCE LENGTH:195

50 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05159

SEQUENCE DESCRIPTION:

GATCAGTATA CAGTGTACGT AAACACACC ATCCTCAAAC CCCGGAAAGC AAAGCAAATC 60  
 AGGAAGAAAA GTGGAGGTTA GCAACACACC TNTGGCCCCA AAGNACAACC ATCTTGTTAA 120  
 CTATTGATTC CAGTGACCTG ACTCCCTGCA AGTCATCGNC TGTAACATTG GTAATAAAGG 180  
 TCTTCTGNCA TGAAG 195

SEQ ID NO:4340

SEQUENCE LENGTH:54

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05160

SEQUENCE DESCRIPTION:

GATCTAATAT TCAGGAATTT TTCTCCTAAA GACACCCAGT AAAAATATCA CAAA 54

SEQ ID NO:4341

SEQUENCE LENGTH:89

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05161

SEQUENCE DESCRIPTION:

GATCACTGTG TAAACTAAG TNTCTCTAAA TGTAATGCAT CGATTAGTG TCTGGAACAT 60  
 AATAAATATT TGCTCTCATG ATTGCTAAA 89

SEQ ID NO:4342

SEQUENCE LENGTH:89

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05162

SEQUENCE DESCRIPTION:

GATCTACATC CCCATCCACC TATACGGACA TCCTTTCCGT TGTGGTTTGA GAATGTTCTT 60  
 ATAATAAACC CCTCTGCTTT GTTCTTAAA 89

SEQ ID NO:4343

SEQUENCE LENGTH:102

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05163

SEQUENCE DESCRIPTION:

GATCGTCTTG TATGGTGAAT TTCTAGGAG CGATGATGTA CTGTAATTTT ATTTTAAATG 60  
 ATTNNGATTT ATGATTATNT ATTAGTTGNN TTTAAATGCT TN 102

SEQ ID NO:4344

SEQUENCE LENGTH:248

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05164

SEQUENCE DESCRIPTION:

5 GATCAATTNT GCANCANACA NCAATCTTAA CCATTTCAG AAACACTAG TTATATTAGG 60  
CACGTTTTAA AAACCTAAAC AAAATAAAGG CCATCCCAA CCCTGGGCTG TTGTCGGGT 120  
ATTTGCAGC AGGGTTGTGT TCAAAANCTT CCTTGACTC CCTGAGACTT TATCTNCTNC 180  
TTGCAGAGTA AGATGGAAAG CCANTCAGTG TTTGCNGTAA TGTAATACAG NGTAGTGCCA 240  
10 TTCNGGNN 248

SEQ ID NO:4345

SEQUENCE LENGTH:239

SEQUENCE TYPE:nucleic acid

15 TOPOLOGY:linear

CLONE:HUMGS05165

SEQUENCE DESCRIPTION:

20 GATCCAAACT TCTACAGCAA AAACCTACTT CTTTtagGAA AGACATACTT GAAACTACAC 60  
AACAAAAAGC TTGCTGCTT CTGGCTAATG AAAGCCAAGG ACTATCCAGC ACACACAGAG 120  
GAGGATAAAC AGATACAGAC AGAAGCTGCT CAGTTGCTTA CAAGTTTCAG TGAGAAGANT 180  
TGAGAACTTT TCAGAGAAGA TTTATGAAAT AGCTAATAAA CATTGCCTT TCTTTTAA 239

25 SEQ ID NO:4346

SEQUENCE LENGTH:223

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05166

30 SEQUENCE DESCRIPTION:

GATCAAAAAA TGTCTCCGCT CAGGGATTTA TGGTGGATTA TTGCAGACAN TGCTAAAAAT 60  
ATAGAGCACA AGACAAGTTT ACTAAATTA AATTTTATTT TTTGAGAAAC TGTATTGT 120  
ATAAATTATC AAGATTGTGA GGCTTTCCTT TNGTAGAAAT AATTGTTTGA TGTGCCAGAG 180  
35 AATTCAATT TNGTTTTCAA CAATAAGCA TTGATAAGAG AAA 223

SEQ ID NO:4347

SEQUENCE LENGTH:52

SEQUENCE TYPE:nucleic acid

40 TOPOLOGY:linear

CLONE:HUMGS05168

SEQUENCE DESCRIPTION:

GATCATTTGT TTATAAAAAT GTGTCCTATT ACACAGTGAG TTAACCTCA AA 52

45 SEQ ID NO:4348

SEQUENCE LENGTH:334

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

50 CLONE:HUMGS05169

SEQUENCE DESCRIPTION:

55

GATCCGAGCG ACCATGGTGG CCCGGGTGTG GTCGCTGATG AGGTTCCCTCA TNAAGGGAAG 60  
 TGTGGCTGGG GGCGCCGTCT ACCTGGTGTA CGACCAGGAG CTGCTGGGGC CCAGCGACAA 120  
 GAGCCAGGCA GCCCTACAGA AGGCTGGGGA GGTGGTCCCC CCNGCCATGT ACCAGTTCAG 180  
 5 CCAGTACGTG TGTCAGCAGA CAGGCCTGCA GATACCCAG CTCCCAGCCC CTNCAAAGAT 240  
 TTTACTTICC NATCCGTGAC TCCTGGAATG CAGGNATCAT GGACGGTTGA TGTCAGNTCT 300  
 NNTNGGTGGC CCCTTTCAA GGGNCNGGTG AGTN 334

SEQ ID NO:4349

SEQUENCE LENGTH:146

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05170

SEQUENCE DESCRIPTION:

GATCCATCAA ATTGAACAAT CTGTTGTAAT TAAAAATTTT GGCCACTTTT TTCAGATTTT 60  
 ACATCATTCT TGCTGAACTT CAACTTGAAA TTGTTTTTTT TTNCTTTTGG GATGTGAAGG 120  
 TGANCATTCC TGATNNNGGC CTCNNN 146

SEQ ID NO:4350

SEQUENCE LENGTH:257

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05172

SEQUENCE DESCRIPTION:

GATCTCAAGC CTCTTCTGAA CCCCAGGCTT TCTTGAGTCT CCATATGAGC ATTTGCCTCT 60  
 GTGGGCACAA CTTCAAGTGT CCTTTGTGAG GAAATGTGCA TCTCTGGNTG GTGAACTTCC 120  
 30 ATCCCTCAGA GAGAAATAGA AGCACAAATT TGAACAAGC TGTCTGTCTG NGNNNNNNCT 180  
 TTATGTCTTG GAACTTTAT TTATCCATCC AAGCTTTNTT TTTTTTTTAG CCTTTNNGGG 240  
 CAGGNAACCA TCCAGGN 257

SEQ ID NO:4351

SEQUENCE LENGTH:73

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05173

SEQUENCE DESCRIPTION:

GATCTGTCTA CTGAGAAGAC CCAATCTTG GTTCTAAAT GCCATTCTTC AATAAAAGGA 60  
 ATTGGGTTTC AAA 73

SEQ ID NO:4352

SEQUENCE LENGTH:73

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05174

SEQUENCE DESCRIPTION:

GATCTCCTTC TCCNTCCTGT CCTGTCTTG CCCCTCAGGA CTGCTGGAAA ATAAATCCTT 60

TAAAAATAGTG AAA

73

SEQ ID NO:4353

SEQUENCE LENGTH:306

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05176

SEQUENCE DESCRIPTION:

GATCCAAGCA GGGGGATGAA AAATCAGCA GAGAAATTCG AGACCATTTT CCAAGACTNT 60  
 CCCCTTCTCC TCAGGACCCC CTGGCTCAGT NCTTGAAAAA CGGTGTCATA TTTAGTCAGA 120  
 GGCCCCACCC CCAGGAAGCA TGGATGGGGA TGAAGGCACA GCGTCTCCA ACCTCAGAGG 180  
 CCCTTTGTGG GGTGAGGACA CAGAGTGGGN AGANGAGACT GATGCAGGCC TACCAGTNCC 240  
 TGGCTTTTGG TCTGGGGCTG GAATAAAGAG GTGNCTTCAG CTGTTTGGNN CGAGAGGCAG 300  
 GGTAAG 306

SEQ ID NO:4354

SEQUENCE LENGTH:76

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05177

SEQUENCE DESCRIPTION:

GATCAACTGG AACCTCTGTA TCATGCGGCT GAATTCCTT TTTCTTTAC TCAATAAAAG 60  
 CTACATCAGA CTGAAA 76

SEQ ID NO:4355

SEQUENCE LENGTH:52

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05178

SEQUENCE DESCRIPTION:

GATCAGGCTT TTAGGACCTA GGAAACAAAT AAAGAGGAAT TTGTTGCTGA AA 52

SEQ ID NO:4356

SEQUENCE LENGTH:268

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05180

SEQUENCE DESCRIPTION:

GATCCTTATT CTAGTACAA GTCAAAGATA ACTCCTGGTC CAGACAAAAC ACCTGGCCTA 60  
 TCACAAGCTG ACTAAAAATC TGCACCTTGG GCCAGCGCAG GCAACAGTAA CTNTGACAGG 120  
 TTCAAATTAG ACCTCACACT TTCTACTCAT ATTCTAGTCA CTGGACCCAT CTGANTCAGT 180  
 AATCCCTNCT GCCCGGTCCT GGAGTAACTT CTTAGAGATA TTATAGCAAG TGGCAAAANT 240  
 AAAAGAGGGA TTTGCTANGA NTATCAAA 268

SEQ ID NO:4357

SEQUENCE LENGTH:114

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05181

SEQUENCE DESCRIPTION:

GATCTCAAAT ATAAATTGA GATTATACAT GTAGTTATGT ATAGNGNCAT GTAGTTACAC 60

ATAGTTTGT ATTTNCCTGT TTTTCTCA TATGAGCATT TNCTTATTAA NGTN 114

SEQ ID NO:4358

SEQUENCE LENGTH:179

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05182

SEQUENCE DESCRIPTION:

GATCTACACG TGTTGTTTTG TTTTNCCTT ATTGATGCAC GNATGCTTTT GAACAGTAGA 60

GNAAAATGCT AGACATGGAG AATCTGCTCT GTTTGTCCTN TATACATTTC TGTAGTTAAC 120

AGAACACTGT AATGTGCCTT GGAGCTTAGT AACTNGTAAT AAATTCAATN GATATTAAA 179

SEQ ID NO:4359

SEQUENCE LENGTH:85

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05183

SEQUENCE DESCRIPTION:

GATCCTAAAT CCTATGTAGG CTNNGGTTAT TAGTGTATAT TTGTGTCTTA AAACAATTTT 60

GAAAGTNAAA AAAATATTTT TTAAT 85

SEQ ID NO:4360

SEQUENCE LENGTH:194

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05184

SEQUENCE DESCRIPTION:

GATCTNATTT TGAGATTAAA AAAAATACTT CTAGCTTTAG CCAGGTGTGC ATGTNGCTGC 60

CATTTTGCAT TTTTGAATCA TCTTGTGTAA TTGTCACCAT GAAAGTGTTA CTCAGAATNG 120

TCATAGATTT NNTNTCTTT GTGCAAAAAC ATGGAATTT GTCAGTACT TTGTTTGTAG 180

GTTTCCCCGG NNNN 194

SEQ ID NO:4361

SEQUENCE LENGTH:216

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05185

SEQUENCE DESCRIPTION:

GATCTGCTGT ATGTTACAGT TATGTAATTT GACTTGTTTC AAAATTATTA AAGTTTAAAG 60



TGTATGCATT CTA CTGGTCA ATAAGTAAAT ATATTCAGGC TCTGAATGTA GACAGATAAA 120  
 TATATAAATA TAGAAAGTAC ATTTGTTAGA ATACAAACAA GAATAAAAAAT TGAGTACAGA 180  
 NTGAAAACCT TATTAAATTT TATCACTCCA TATAAA 216

5

SEQ ID NO:4362  
 SEQUENCE LENGTH:333  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05186

10

SEQUENCE DESCRIPTION:

15

GATCAAACTC AAGCTCACAC CTGTACCTGA TGGGAATGAA CATAATGTGA AGAACTTAT 60  
 TTCCAGTGT AACGCAGTT GTACAGAAAA AAAATGTTTT GGGTATAAAT CTGGGTTTTT 120  
 AAAACCAGCT TTNTTCTATA TATAAATNAT GCTGCTATTA CAGATTTAAC ATTNCTGTT 180  
 AAAGGAAAGT CTACATTTTC TGCCTGTNCA GAACTGTTTA ATAGCAGTNN CTCTTGAGTG 240  
 TATTNCCCTT GGTATGTTTT TNAACCTATT TTCCTTNAAG CCGAAAATAT TGCCAATTGG 300  
 ATANGGTTAG CTTANNAAG TNNATAAAN NAN 333

20

SEQ ID NO:4363  
 SEQUENCE LENGTH:185  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05187

25

SEQUENCE DESCRIPTION:

30

GATCAGCCAG TCTCTTTCAT CATCAAGCAG ACATACTCAA GGTACCAACA CAGCAAAGGC 60  
 ACAAATGTC TCTATATCAG TATTTTTCAT GGTATATGTG AGACCCATTA GTGAGGCATG 120  
 AAATCAATTC TGTGAGTCAC AATGAACATT TGTCTAAAAA ACATAATAAA NTGTAATAA 180  
 CCAAA 185

35

SEQ ID NO:4364  
 SEQUENCE LENGTH:108  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05188

40

SEQUENCE DESCRIPTION:

GATCCTTTCC CATTTATTCT GGAAGATGT TTTCAAAC CAGAGACAAG GACTTTGGTT 60  
 TTTNTAAGAC AAACGATGAT ATGAAGGCCT TTTGTAAGAA AAAATAAA 108

45

SEQ ID NO:4365  
 SEQUENCE LENGTH:201  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05190

50

SEQUENCE DESCRIPTION:

GATCATTGG CTCTTTTTT CCTCCAGAA GAGTNGCATC AACAAAGTTA ATTGTATTTA 60  
 TGTATGTAAG TAGATTNAA NCTTCATTAT AAAATATTGT GAATGCCTAT AACTTGTTN 120

55

NCAATGTGNT TGTGTGTGTT TCTAAGGACT TTTTCTTNGG NTTGCTAAAT ACTGTAGGGT 180  
TGAAAATGCT TCTTTCTACT N 201

5 SEQ ID NO:4366  
SEQUENCE LENGTH:118  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
10 CLONE:HUMGS05191  
SEQUENCE DESCRIPTION:  
GATCCTTCAT GGACANTATT CTAAGTATA CGTAGACACT TACTTGAAAA TTTTGGACA 60  
TTATATTTAA TGAGTGCTAT CTGTGAAATT GGTATATTA GGTGGCTNNN NCTAATGN 118

15 SEQ ID NO:4367  
SEQUENCE LENGTH:277  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
20 CLONE:HUMGS05192  
SEQUENCE DESCRIPTION:  
GATCTGAGGT CTAAGCTAG GAGAGACTGA GAATTTTAAT CAGTTTGGGC ATATAGTTTG 60  
GACTGAATCA CATCTGTAGT ACTTAGCCAA AGACAATTG GAGGAGAATA TCAGCCTTCT 120  
25 GGAAGTAGCT ACTTCTGNT CAATGTAAAG TGTCGCAGAT ATTCAATAAA ATGGCAACCT 180  
GTTATAATTT TTTTGAATAT CAGCCTTCTG GNAGTAGCNA CTTCTGTAN CAAANGTAAA 240  
GNGTCGCAGN TATTCAATAA AATGGCAACC TGTTTTN 277

30 SEQ ID NO:4368  
SEQUENCE LENGTH:209  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05194  
35 SEQUENCE DESCRIPTION:  
GATCTCTTGA CAANTGTGTA TGTTAACTTT TTAGCACATG TTTTGTACTT AGTACACGAG 60  
AAAACCCAGC TTTCATCTTT TGTCTGTATG AGGTCAATAT TGATGTCCT GAATTAATTA 120  
CAGTGTCTTA TAGAAAATGC CATTAAATAA TTATATGAAC TACTATACAT TATGTATATT 180  
AATTAATAACA TCTTAATCCA GAAATCAAA 209

40 SEQ ID NO:4369  
SEQUENCE LENGTH:58  
SEQUENCE TYPE:nucleic acid  
45 TOPOLOGY:linear  
CLONE:HUMGS05195  
SEQUENCE DESCRIPTION:  
GATCGTGTG GAGACTNTNA CACAGTTTAA ACACATCAAT AAATACTTTA ACTTCAAA 58

50 SEQ ID NO:4370  
SEQUENCE LENGTH:108

55

EP 0 679 716 A1

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05196

SEQUENCE DESCRIPTION:

GATCGAGGTA GTAAAGGCCA TCCACATTTT AAAGGGTTAT TTGTCTNTNN TATAATNCGT 60  
TTGCTTTCAG AAAATGTTTT AGGGTAAATN CATAAGACTA TGCAATAN 108

SEQ ID NO:4371

SEQUENCE LENGTH:190

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05197

SEQUENCE DESCRIPTION:

GATCAAACAG GGACACAAAA GCAAGTATCA TGGGAGGAAC TTGAAATCTC TGNGGACAGC 60  
AGAAGCTGAC TTCAACTCTN ATAATTGTGG CATCCATAAA TTGCAAATAT AGCCCTGAAT 120  
AGATACACAC AAATGTCTAT AATGAAGGCC CAGCAGAATG GAATGTGTGA CCATCTTCAG 180  
GAAGAAAATN 190

SEQ ID NO:4372

SEQUENCE LENGTH:241

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05198

SEQUENCE DESCRIPTION:

GATCAATCCC TAGTAAAAGC CCTGGACACC TAGGCATGGG TGAGCTACTN TGGTTGGTAA 60  
TACTCTGTGC ACACATCATT GTAGCCACAC ATCATTGCTG GGAGAATTAA GCATTATCCT 120  
GAAGACTCTG CCAGGAGAGG ATAATTGGAA GTTCTCTTGG ACCTTACCTT ATGTGCCTTT 180  
NTTCATTGCT GATTTTAATC TGTATCCTTT CACTGTAATA AACTGTAAC TATGNGTGCAA 240  
A 241

SEQ ID NO:4373

SEQUENCE LENGTH:51

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05199

SEQUENCE DESCRIPTION:

GATCGTTCAT TGCCTTTCCA GGGTTATTTA GTAAAGTTTG TTGAAAACAA A 51

SEQ ID NO:4374

SEQUENCE LENGTH:153

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05200

SEQUENCE DESCRIPTION:

GATCTCAGGT GATTACCCG CTTCTGCCTC CCAAAGTGCT AGGATTACAG ACATGAGCCA 60

CCGCACCTGG CCATACAATT GCCTTCTATA TGTTTTTNAT TTAATATGAC ATTTGTATTT 120  
 CCCCATGTTA TTAATAAATT CTNTATAAGC AAA 153

5 SEQ ID NO:4375  
 SEQUENCE LENGTH:103  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05201  
 10 SEQUENCE DESCRIPTION:  
 GATCACCCCA CCTGTGAAG AGGCAGTTGG TGCTGGCAGT AAGCTGGTTT CCTCCTCTCC 60  
 AGGGTTTTTC TAGTAATAAA GGTGTTNCTG TTGANGCCGT AAA 103

15 SEQ ID NO:4376  
 SEQUENCE LENGTH:390  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05203  
 20 SEQUENCE DESCRIPTION:  
 GATCACATTC ATTCCATAGG TAGCTTTACG TGTGGCTACA ACAAATTTTA CTAGCTTTTT 60  
 CATTGTCTTT CCATGAAACG ANNTGANGAA AATGATTTTC CCTTTGCAGG TTGCACACAG 120  
 TTTTGTTTAT GCATTTCCCTT AAANTTAATT GTAGTCTCNA GGATACAAAC CATAGTAGGC 180  
 25 AATACAATTT TAGAATGTAA TATATAGAGG TATATTTAGC CTCTTTTAGA AGTCAGTGGA 240  
 TTGAATGTCT TTTTATTTTA NNTTTTACAT TCATTAAGGT GCCTCGTTTT TGACTTTGTC 300  
 CATTAACTT TATCCATATG CCTTTGCAAT ANCTAGNTTG GTGNAAAGCT AACCAAGTGT 360  
 TGTAACCANT AATCCNTTGT TTNGNGGTGN 390

30 SEQ ID NO:4377  
 SEQUENCE LENGTH:144  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05204  
 35 SEQUENCE DESCRIPTION:  
 GATCACATGC AGGACTCTTT CTTAATGCAG CCTGAGACAA ATCTTGCAAT ATGAAGAGAT 60  
 GATTTCAGG TTTTATTGAA TAAATGAATT GTAATTTTAA CTGAAATTA TCTTATTAG 120  
 40 TATAATAAAT ATTACAATAT TAAA 144

SEQ ID NO:4378  
 SEQUENCE LENGTH:386  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05205  
 45 SEQUENCE DESCRIPTION:  
 GATCCCACAG CGAAACACTG GCCACTGGCT ACCAGTATTN CTTCCACAG CTAGGGGCTG 60  
 CCTTAAAGGA AATTGTAGCC TAAGTAGGTC GTGGCAAGGG CCTGAGGCCT GTTCCTCACA 120  
 50 GGCTTCAGG TTAGGCACTG TGAATAGGCT CAGCTCCTCT AGAGAGCTGA AGCCATCTGG 180

55

EP 0 679 716 A1

5 TTCTTAGATT CCTCTCCAG TCCTCTTCC CATTGTTCTG TTGCTCCACC TTATTGTCTC 240  
 AAGGCCGTAA TCTCATCAGG TTGGGACATT AATCTTTTCA ACTCCTTTGT AAAGATTTC 300  
 CAGTTTGGTT TCTCTACATG TNCTGCAGCT GGCCNCAATT CTCCTTTNAC GTTGTGTAGA 360  
 GAATGNTCTG CAGTTTTAGG GCAAGN 386

10 SEQ ID NO:4379  
 SEQUENCE LENGTH:174  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05206  
 SEQUENCE DESCRIPTION:  
 15 GATCTAAACG AAAAATAGTT TCTTGTTTAA ATTCACATAA GGCAATNAGA TATGGAAAAGA 60  
 TGACAAGATA CGTATAACA TTGGTTTGCA TTTTATTAAA TNATTCTAAT GCAAATCTTG 120  
 TATAAAGAAC CCATGATGTT TTGTAACTTT CTAATTAAAA TGTCAAAAT GAAA 174

20 SEQ ID NO:4380  
 SEQUENCE LENGTH:207  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05207  
 SEQUENCE DESCRIPTION:  
 25 GATCTTGGTC AATAACTGGG AGATGGACAA ACTAGAGATG GAAGATGCAG TCACATTTTT 60  
 GAAGACTAAA ATCTATTGAG TAGAAGCTCT TCCTGTTGCT GCTGTAAATG TGCAAAGCAC 120  
 ACAATAAAGT GAAAATCAAC CTTTTCATAT TAGGAGACAT GCATTGTGTA AAATTAATAA 180  
 AGATGACAAG TCAGTTGTCA ATGGAAA 207

30 SEQ ID NO:4381  
 SEQUENCE LENGTH:189  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 35 CLONE:HUMGS05208  
 SEQUENCE DESCRIPTION:  
 GATCAGCACC TTGGCCGTGA TTCCCAAGGT CCCAGCCAAA GCAAAGGGCC AGTTGTTTCA 60  
 GTTTAAACAG ACATGTCTTT AGTCTAATAA AATTAGTTAA CTGCCAGTAA AGTTATTTGT 120  
 40 TAGCTTTGNT GAAAGCTATG NNGGTATCTT TCCCTAATCA TCAAAGTAAA TAAAAANTCA 180  
 TTTCTNAAA 189

45 SEQ ID NO:4382  
 SEQUENCE LENGTH:502  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05209  
 SEQUENCE DESCRIPTION:  
 50 GATCTGTTCT TTTAAGTTG ATTCGGGAGT GGCATTCTTT TATACCCAAA GACTGTAGTG 60  
 CATCTTGAAG AGCTCAAAGC ACATGACCGC ACAAATGCTT ACAGGGTTTC CTCCCGAGTA 120

55

ATCCAATCTC ACTCCCCTTG TAAGGGAATT CTGGGGCAGC TATGGTTTGA GTATGCAGTT 180  
 TGCATCGTGT TTCTACCTTT AGTACCTTGC CACTCTTTTA AAACGCTGCT GTCATTTCCT 240  
 ATTTCTTAGT ACTAATGATT CTTTGATTCT CCCTCTATTA TGTCTTAATT CACTTTCCTT 300  
 NCCTAAATTT GGTGATTGG CATATCAAAT TCTGGTAAAA TNGTTTNGG TAAANCATAT 360  
 TTACCCNCAC TTGGGGTAAA TCCCAATTCC TGGNTAGGNN CTTTAAAAA NGGGTTTTTN 420  
 NTTAATNGGG NNAATCCAAT TATTAATAAN GGGGGGNCCN TTTTNAAG GGNGGAANAA 480  
 ANGGNGAGGG GGNAGNTNGN GN 502

SEQ ID NO:4383  
 SEQUENCE LENGTH:383  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05210

SEQUENCE DESCRIPTION:  
 GATCTCTGGT CAGAGTGAAC TCTTGCTTCC TGTATTGAGG CAGCTCANAG CAGAAAGTAA 60  
 GGGGCAGAGT CATACTGTG GCCAGGAAGT AGCCAGGGTG AAGAGAGACT CGGTGCGGGC 120  
 AGGGAGAATG CCTGGGGGTC CCTCACCTGG CTAGGGAGAT ACCGAAGCCT ACTGTGGTAC 180  
 TNAAGACTTC TGGGTTCTTN CCTTCTGCTA ACCCAGGGAG GGTCTTAAGA GGAAGGTGAC 240  
 TTCTCTCTGT TTGTCTTAAG TTGCACTGGG GGATTCTGA CTTGAGGCC ATCTNTCCAG 300  
 CCAGCCACTG CCTCTTTGT AATATTAAAG GCCTTGAGCT GGAATGGGGA AGGGGGNCAA 360  
 GGGTCAGTCT NTCGGGGTNG GNN 383

SEQ ID NO:4384  
 SEQUENCE LENGTH:258  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05211

SEQUENCE DESCRIPTION:  
 GATCAAACTG TTGGAGGAGA AGCTGAAGGA GGCTGAGACC CGAGCAGAGT TTGCCGAGAG 60  
 GTCTGTGGCA AAGTTGGAGA AANCCATCGA TGACCTAGAA GAGACCTTGG CCAGTGCCAA 120  
 GGAGGAGAAC GTCGAGATTC ACCAGACCTT GGACCAGACC CTGCTGGAAC TCAACAACCT 180  
 GTGAGGGCCA GCCCCACCCC CAGCCAGGCT ATGTTTGCCA CCCCACCCA ATAAAACTGN 240  
 TGTTACTAGN CTNTNAAA 258

SEQ ID NO:4385  
 SEQUENCE LENGTH:174  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05212

SEQUENCE DESCRIPTION:  
 GATCAATGAA AGGAGACATC TGGAGTGTGC GTGCTTCTTC AGAGGGACGG GTGATGGGCA 60  
 GATTGGAAAA AGCACCAGCAG ATGGGAACCT TAATCTTTCT TTTCTAAAAAT TGATGCTATG 120  
 AAAATTTGCG TTTTCTGTAA CTTGTAAAAA CTAAGGTTG CTTGTCTACT GAAA 174

SEQ ID NO:4386

SEQUENCE LENGTH:62

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05213

SEQUENCE DESCRIPTION:

GATCAGGCAA AAATAGTTT CCAAAGTTAT TTTAATAAA GTATATACAA AATTCTTATA 60  
AA 62

SEQ ID NO:4387

SEQUENCE LENGTH:217

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05214

SEQUENCE DESCRIPTION:

GATCTAACGC CACACCTCCG TGAAACACA ANTCNCACAG CAGGAACCAC NTGAACCTGG 60  
ACATCAGCAG TTTATTCAGC AGATGCTTCA GGCTCTTNCT GGAGTAAATC CTCAGCTACA 120  
GANTCCAGAN GTCAGATTTC AGCAACAACT GGAACAACCTC AGTGCAATGG GATTTTNGAN 180  
CCGNGAAGCA AACTTGCAAG CTCTAATAGC ANCAGGN 217

SEQ ID NO:4388

SEQUENCE LENGTH:95

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05215

SEQUENCE DESCRIPTION:

GATCTATGCA GACAACGTG TATTCTGTTT TATAACAGTT TGTTTGAATT TACTTACAGT 60  
TAAAAAATTT AAATATATTT ATGTTTGTAC GGAAA 95

SEQ ID NO:4389

SEQUENCE LENGTH:192

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05216

SEQUENCE DESCRIPTION:

GATCTGGGTG AAGGGGAGAA CCTGCCATCT TATCCCTACC CCCCCGGGGC CCTCAAGCTT 60  
ATTTTCTGT TGAAGAAACA CAAAACCTC GAGATTCATG TACTGTATGT TGGAGAAAAA 120  
AAATTACCTA ACTGTTCCCC CAAAAAAGTC AGTATNTTTT GTACTTTGTA AAAGTGTTGG 180  
TTAAAAATGA AA 192

SEQ ID NO:4390

SEQUENCE LENGTH:135

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05217

SEQUENCE DESCRIPTION:

GATCTGCAGC CTTTGGGTA TCAAATGGGT CAAAACCATG GGACCTGCCA CCTCCCATCA 60  
 GCAATTCTGG AAATGCACTA TTTCTACTGG TGNTCTTGCT TTTTTTTTTT TTNNATTTTC 120  
 TNGNTGAANT GCCAN 135

SEQ ID NO:4391

SEQUENCE LENGTH:270

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05218

SEQUENCE DESCRIPTION:

GATCGTANTT AGTCCTTTTC ATCTCAGCTG CTCCTTAAAT CAGTGCAACC CCTCCAAATT 60  
 AATGTGAATT GAAACTTGCA TTGCTTTTCA ACTTAATTGA ATACTTACTA TATGTGAACC 120  
 ACTGCACAAA ATAGGGGAAG AAGATGTGGG AGACAAAGAT GTGGAGCCTG TCTTCAATAA 180  
 ATTTACAGTT AGTTTCAGGG TACATTGTTT TNCTNCTGCT GTTAATTAGG TGTATCCCCA 240  
 AGACAATAAA TACATGGNTG GGAAAGTAAA 270

SEQ ID NO:4392

SEQUENCE LENGTH:123

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05219

SEQUENCE DESCRIPTION:

GATCAAAATT GGNTAAATTC TATTGTAACA ATTTGTTGG TCATTTTGGG CCATAAAATT 60  
 TTTTGTAAAT AGGAATTTGT ATAAAGCATT ACTCTTTTTC AATAAATTGT TTTTAAATT 120  
 AAA 123

SEQ ID NO:4393

SEQUENCE LENGTH:288

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05220

SEQUENCE DESCRIPTION:

GATCNCACCA GTNTNCTNCA NCCTGGGCCA CAGAGCAAGA CCTTGACTCA AAAACAACAA 60  
 CAACAACAAC AAAAATTCCT GAAGATTTTG CATTCTGTCC CACTATCCAT TGGTTTTCAT 120  
 GTCAAGATAA TGTGAGAAAT TCTTTACAAT TGCTTCCAGA AGGANTAGCC TTTTGATTTA 180  
 GTGCACAGGT GTCCAGTCTT TTGGCTTCTC AGGCCACAT TGGAAGAAGA ATGCTCCTGA 240  
 GCCACACATA AAATACACTA NTGNTAACAA CAGCTGATGG AGCTTAAA 288

SEQ ID NO:4394

SEQUENCE LENGTH:156

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05221

SEQUENCE DESCRIPTION:

GATCCTNCGT TCTNTTGTTA TAGATTAGTT TCGGTTTCCT ACAATTTTAT ACACATGGAA 60



TAATACTATA GGTACTCTTG TTTGGCTCCT NCCATCCAGC ATAATAAGTT TGAGATTCAT 120  
 NCATGTTGTT ATATGCGTCT ATGTTCAATC CTNNNN 156

5 SEQ ID NO:4395  
 SEQUENCE LENGTH:149  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 10 CLONE:HUMGS05223

SEQUENCE DESCRIPTION:  
 GATCCTNCTT TTCCTTCATG NCAGCACAAG TGCTCACCGG GGCCAGAGCC AGGGCATGGA 60  
 TATGACAAGC AGGGCAGCCT GGACACTGCC CTCACAGGAC AGCGCCAATA ACAATACAGT 120  
 GTCTGAGTAT CTCCAGGGGA AAAAATAAA 149

15 SEQ ID NO:4396  
 SEQUENCE LENGTH:204  
 SEQUENCE TYPE:nucleic acid  
 20 TOPOLOGY:linear  
 CLONE:HUMGS05224

SEQUENCE DESCRIPTION:  
 GATCCTGCTT GGNCTATCAC AGAGCATTGA CCATTGGCTT CCCTCATCTG AGNCGTGGGA 60  
 GAGCANACTG GATAGATGAG AATTGTTTTA AAACAATTGT GAACAGAAAC TGNAGATGGT 120  
 25 ACAGTNCAC ATCTGCACCT GCCCTTTTTT CATACCACAA AAGTATTTTT NNAGTACTGT 180  
 ACTGGACTTT TTGCNAGTNN CTAN 204

30 SEQ ID NO:4397  
 SEQUENCE LENGTH:213  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05227

35 SEQUENCE DESCRIPTION:  
 GATCCTGATG TATGAGGAAA AAGCGAGAGA AAAGGAAANG CCAACAGGCC CCCCAGCCAA 60  
 GAAAGCTATC TGTGAGTTGC CCTGATTGTA AGGGAAAAGG GATGATGGGA TTGAAGGGGC 120  
 TTCTAATGNC CCAGATATGG AAACAGAAGA CAAANTTNTA AGCCAGAGTC AACAAATTAA 180  
 NTAAATTACC CCCTCCTCCA ANAANTANTT TNN 213

40 SEQ ID NO:4398  
 SEQUENCE LENGTH:67  
 SEQUENCE TYPE:nucleic acid  
 45 TOPOLOGY:linear  
 CLONE:HUMGS05228

SEQUENCE DESCRIPTION:  
 GATCCATCTG AGGAATCACT CTGTGTTGCA CTTATGCCCT CATAAAANAT ATTTATTGAA 60  
 GAATAAA 67

50 SEQ ID NO:4399

55

SEQUENCE LENGTH:70

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05229

SEQUENCE DESCRIPTION:

GATCAATGCA TTTNATACGG ATATAGACCT AGGGCTCTGG AGGGTGGGGN ATTGTTAAAA 60  
CACATGCAAA 70

SEQ ID NO:4400

SEQUENCE LENGTH:148

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05230

SEQUENCE DESCRIPTION:

GATCTCTATA GAGGCTGGAA TGGCCACAGA GAATCTAAAT NTGAAAACAA ACATGTCCTG 60  
AGGGTGTGCT CCAATACCAC CCNNTAATAC TCTCCTGAGA TGTGAAGGCT NGAAATGAGA 120  
ATGCCATNTT ATTGTNACTT NCAAACGN 148

SEQ ID NO:4401

SEQUENCE LENGTH:210

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05231

SEQUENCE DESCRIPTION:

GATCCTTGTT TTGAGTCTC AGAATCACTC AGACAACATT TTGTAAGTGC TGCTGTTGCT 60  
TTCTACATAC ACCTTATAAA GTGACATTTC AAAAGAAATA AGGTGCCACA GTTTTAAACC 120  
AGAAGGTGGC ACTCTGTGGC TCCNTGTAGT ATTATAGCTA TACTGGGAAA GCATAGATAC 180  
AGCAATAAAG TACAGTAATT TTACTTTAAA 210

SEQ ID NO:4402

SEQUENCE LENGTH:71

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05232

SEQUENCE DESCRIPTION:

GATCCTGTTG CAAACTGTGA ATATTCTGAT GATGCCAGTA CAGTTTGATT TATTAAATGT 60  
GGGTCCTCAA A 71

SEQ ID NO:4403

SEQUENCE LENGTH:240

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05233

SEQUENCE DESCRIPTION:

GATCTGAACC CGTCTCCCGG GTGCTGTAAA TAGTCTGATA AACGTTTACA CAGTCTAAAA 60

EP 0 679 716 A1

TTACCCCTTTA TATTTGCTGA ATACAACTCA TCTTTTGTAG TTTAAAAATT CTATTGTTTT 120  
GGAGCTAGCT GTGAGTTTCT AGAAGTGTAC AGAGTTGCTC CNGTGTTCCT GGGTCANGTT 180  
GAGTAGGGAA TAAATAAATC TGATGCNGCC TCCTGAGGCT GCCGGGGGGT TTCTGCTAAA 240

SEQ ID NO:4404  
SEQUENCE LENGTH:67  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05234  
SEQUENCE DESCRIPTION:  
GATCAAGNAT ATTTTTATT TTAAAGAAAG CATAACCAGC AATAAAAAATA CTATTTTTGA 60  
GTCTAAA 67

SEQ ID NO:4405  
SEQUENCE LENGTH:173  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05235  
SEQUENCE DESCRIPTION:  
GATCTAATTC CAAGGACTTC TCCACAGCTA AGTNAGATGC CTCANACCAT TAGGTGATGC 60  
TTTGGACAGA ACAGAGTATT TNAATCTTGT GTTTAAAGCA ATTCCTTGGC TTCGGCTCCT 120  
CACCACITTC TATGCCAGTN TCCCATTTAT GTCCCTAGTA ATGCCTATGC AAA 173

SEQ ID NO:4406  
SEQUENCE LENGTH:263  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05236  
SEQUENCE DESCRIPTION:  
GATCCCAGCA GTGATGTTGG TTGAGGCAGC AAACAGATGG CAGGATGGGC ACTGCCGAGA 60  
ACAGCATTGG TCCCAGAGCC CTGGGCATCA GACCTTAACC ACCAGGCCCA CAGCCCAGCG 120  
AGGGAGAGGT CGTGAGGCCA GCTCCCGGGG CCCCTGTAAC CCTACTNTCC TCTNTCCCTG 180  
GACCTCAGAG GTGACACCCA TTGGGCCCTT CCGGCATGCC CCCAGTTACT GTAAATNTGG 240  
CCCCCAGTGG GCATGGAGCC AAA 263

SEQ ID NO:4407  
SEQUENCE LENGTH:65  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05237  
SEQUENCE DESCRIPTION:  
GATCAGAATG TTCTAAATNT TGACTAGTTA CTTTTTATTA TGAGTTAATA TAGTTTAGCA 60  
GTAAA 65

SEQ ID NO:4408

EP 0 679 716 A1

SEQUENCE LENGTH:124

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05238

SEQUENCE DESCRIPTION:

GATCTCTATA TTAAATNCTA AAATGGGATT AAAAGAAGAG TTGGAGAATT CACACTTATT 60

GAGTAACTGA TGTACATAAA CCTGGAATTT CTGAATTCCA AATAAATAAA TTCTACTCTT 120

TAAA 124

SEQ ID NO:4409

SEQUENCE LENGTH:234

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05239

SEQUENCE DESCRIPTION:

GATCTATGCA GTATACATTT TNCAGGCTGA AATTCAAGGG GAATCATTCT GATTATNCTT 60

ACTACAAATG GAGATGGCTA TTATGAAACA GCATGAGCAT GAGCCTTTNA TCTNTNATAC 120

TTAGTGATAT ACTTTGCTTG AAAATCACTC AGCAAAGTAG TTCACATGAT GTGTTATCAT 180

ATTTGANGTG TGGNTTNTCT CAAAATCATT GNCTTTAAGG NGCTCATTNC TGAN 234

SEQ ID NO:4410

SEQUENCE LENGTH:191

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05240

SEQUENCE DESCRIPTION:

GATCTNTTTG TATGTNACGT GTTAAGGGCT TGTTTGGTAT CCCACTGAAA TGTCTGTGT 60

TGCAGACCAG AGTCTGTTTA TGTGAGGGG ATGGGGCCAT TGCATCCTTA GCCATTGTCA 120

CAAAATATGT GGAGTAGTAA CTNAATATGT AAAGTNGTAA CATACATACA NTTAAATGG 180

ANATGCAGAA A 191

SEQ ID NO:4411

SEQUENCE LENGTH:308

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05241

SEQUENCE DESCRIPTION:

GATCACCTGA GCTGCCTCAG ATTCCATTG GTCCTCTCCT TCCTGGAAGG CTTCTTTTA 60

TGTTTTGTTT TAATCCCAAA TGTCTGAATG TTTTGCAAGT TGTAGGGGTT TGAGCCCCTT 120

GTTCATTCTC CTTCTTTTTT CCTCCCGCTT CCCTCTCCAT GAAGTGATTC TGTGACAAT 180

AATGTATACT GCGCGTNTCT TTCCTGGTT TATCTGCAGA AATNNCTCTG GGCTTTTNTC 240

GGTGTTAGAT TCAACACTGC GCTAAAGCGG GGATGTTCCA TTGAATAAAA GAGCAGTGTG 300

TTTTTAAA 308

SEQ ID NO:4412

EP 0 679 716 A1

SEQUENCE LENGTH:210

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05242

SEQUENCE DESCRIPTION:

GATCCACCCA CCTGGCCTC CCAAAGTGCT GGGATTACAG GCGTGACACN CAAACCCAGC 60  
 CACCAATTTT ACTTTAGGTA AACTTTTATT TTCAAGCTTT TGTGGGTGTT GCAAGTGTA 120  
 ATCTGTTTTA TAAATGTTC TATAAATATA ACCACTATTC CTTGTAAGCT ATTAAAAATA 180  
 AATTTTAAAG TCTTCAAGT AAACACCAAAA 210

SEQ ID NO:4413

SEQUENCE LENGTH:337

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05243

SEQUENCE DESCRIPTION:

GATCTGAATT TAGGNACATT TCCTTTTCT GTGGGAATCA CAAGAGTTTA TCCACTAAAA 60  
 AAAGATATGT AAAAAAGATA CTTTCCAGCA CATAAATAA GGCTGGAATT TTACAACCTG 120  
 ATGTATATAT TAGACAGTTC TAGGATGTTA GTTCCCTNCA TNCCAGAGCT ATGCTTGTA 180  
 TACAGCCCCT TTTCTTATAA AGTCAGTTAG ANGGACTTCC TTAACAATGA CTATTATAAT 240  
 GNCTTNCCTA AAATACAGTT TTGTATTCTG TCAATGCAAA TATAAGACAG GTTGTGCCNT 300  
 AATCATGTAN CANGNNTATT TTGNAGNTT ACATATN 337

SEQ ID NO:4414

SEQUENCE LENGTH:120

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05244

SEQUENCE DESCRIPTION:

GATCAGCTAG CTACCTTCTA CTTTCCATT TTCAAGTGGG TTGTTCTCTT AATTGTATA 60  
 TAACCTGTTG TCTAAATTTT ATGTACAGTC TTTTATAATA AACCATTCTC CTATATGAAA 120

SEQ ID NO:4415

SEQUENCE LENGTH:185

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05245

SEQUENCE DESCRIPTION:

GATCTGGCTC ATCCATCTGC AACTGACCA CGCTAAGAGC TGTCTGCAGT GATGGAAACC 60  
 TTCTCTAGCT GTGCTGTCCT CTATAGTGGC ACCAGCTGCC TGTGGCTACT GAGCACTTCA 120  
 ACTGTGGCTG CAGAGACTAT GTTAAATTGT ATTTAATCAT AATTAATTGA ATTGTAAACA 180  
 ACAA 185

SEQ ID NO:4416

SEQUENCE LENGTH:58

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05246

SEQUENCE DESCRIPTION:

GATCTTAAAA TTCGTTTGCC TTTTAAAGC TATATTAAAA ANGTATTGTT GAATCAAA 58

SEQ ID NO:4417

SEQUENCE LENGTH:109

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05247

SEQUENCE DESCRIPTION:

GATCCACAAG ATTNAGAAAA TATTATATAG TTAGATAATA ACATTCTTGT CTA CTGATAT 60  
CCNANCTNGT TACAAAATTN TTTAAAACTT AAATAAAAAC ATGCATCTN 109

SEQ ID NO:4418

SEQUENCE LENGTH:363

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05248

SEQUENCE DESCRIPTION:

GATCCCTCTA CAGAGCTTCC CTGACTCATT CTGAAGGAGC CCCATTCTTG GGAAATATTC 60  
CCTAGAAACT TCCAAATCCC CTAAGCAGAC CACTGATAAA ACCATGTAGA AAATTTGTNA 120  
TTTTGCAACC TCGCTGGACT CTCAGTCTCT GAGCAGTGAA TGATTCAGTG TTAAATGTGA 180  
TGAATACTGT ATTTNGTATT GTTCAATTG CATCTCCCAG ATAATGTGAA AATGGTCCAG 240  
GAGAAGGCCA ATTCCTATAC GCAGCGTGCT TTAATAAATA AATAAGANAC AACTCTTTGA 300  
GAAACANCAA TTTCTACTTT GAAGTCATAC CAATGAAAAA ATGTATATGC ACTTATAATT 360  
TTN 363

SEQ ID NO:4419

SEQUENCE LENGTH:266

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05249

SEQUENCE DESCRIPTION:

GATCACATTC AGGATAAGTG TACAGAAGAA AATACGGGTG TTTACTCTTT AGGGAAGTGG 60  
AAACACTCCC TGCATTGATG TACATTTTAA GAATGGCACT TTTGATACAT GTTATCATAA 120  
AGGTGCTTAA TAGAGCTGAA TTAAAGTTTT TCAAATCTGT AAACANNGCA AAAANGTAAA 180  
TTGTAGTCAT TTGATTATTT TTTAAATNGG NGCTTTATAT TTNGTNCCTCA CTCAGAGTAA 240  
AAGCTGCAAT TTATTGTNCA CCCAAA 266

SEQ ID NO:4420

SEQUENCE LENGTH:104

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

EP 0 679 716 A1

CLONE:HUMGS05251

SEQUENCE DESCRIPTION:

GATCAAAGCA ATTTACAGAT TCAATGCTAT TCCTGTCAAA CCACCTATGA CATTCTTCAC 60  
AGAACTAGAA GAATAAACTA TTAAGGTTT GTATAAAGTT TAAA 104

SEQ ID NO:4421

SEQUENCE LENGTH:256

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05252

SEQUENCE DESCRIPTION:

GATCTCAACA GTGTGGGGTG AACAGAAGA CTGTATCTTC AGCCTTTTTC CTATAATCAT 60  
GGATGATTG GTCCTATTCA AAAGGACCGC ACATATTAGT ACTCTTAAGA GCATCTTCCA 120  
AGACTCCAGC AGNGAGCATT TAGAGAGTGT GTTGTCTTCC AGAGTCATGA ATGATTTTGT 180  
TTAGCTATCA GGTCTACTAC CTCTAAGGAC ATTCATAGC AGCATCTCTT GAGTTGCCTG 240  
CATCAGTGTG GTGGTN 256

SEQ ID NO:4422

SEQUENCE LENGTH:255

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05253

SEQUENCE DESCRIPTION:

GATCTGAATA TAATTCTGGT AACAGCTGT CTTCATTTT NTCCTCTAAA GAACTTAATT 60  
CATTTGTTAC ATAAAATATA AGGAAATCTT TGTACTATTT TACAGTAACC ACAATCTAAA 120  
TATTTACATA TACCCAAAT TANCCTATGC TCATATATTA GGATGTGAGA NTATCATCTG 180  
TTTATGGACA CATGAAACCT CCTAATGACC TGGAAATTGT AGANTATNTG ACTTTTATA 240  
TGCAAAGTTT TTCGN 255

SEQ ID NO:4423

SEQUENCE LENGTH:58

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05254

SEQUENCE DESCRIPTION:

GATCCCCGGT GGTTTTGTGC TCAAAATAAA AACTGATTAA ACCTTTGTGG CTGTGAAA 58

SEQ ID NO:4424

SEQUENCE LENGTH:234

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05255

SEQUENCE DESCRIPTION:

GATCCTTTTC TTCTCTTATA AATCATCCTC TTAATGAAAA TTAGCCTAAC AAAAGTTTGG 60  
AGACTGGAAT CCTACTTTGA GCCACTGACT TGAAATAACT CTTTGGCAA GTTGCCTGAC 120

ATCCTGTCTT ACCAAGGTGG CAGGTTTGCA TTTTACTGC TAAAAACATT TTTNTTTTTT 180  
TAACCATCTT NANCCAAATT NATCATATNN GNGGTNGGCC TANCAGGNTT TTNN 234

5 SEQ ID NO:4425  
SEQUENCE LENGTH:200  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
10 CLONE:HUMGS05259

## SEQUENCE DESCRIPTION:

GATCCACCTG CTCAGCCTC CCAAANTGCA NGGTATTACA GNCANGAGNT TCTGCGTCTG 60  
GCAATAATGT AACTTTGAAG CTTAAAAATT AATCCCAGTT TGTAAGCAATA ACAGAAGACT 120  
ATCTACAACG GAAGAAAGAA GCAACTGCCT TACAGTTCTG TAAAGANTTG GCAAGAAAAAT 180  
15 AAAGCCTATA GTTGCCGAAA 200

SEQ ID NO:4426  
SEQUENCE LENGTH:84  
20 SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05260

## SEQUENCE DESCRIPTION:

GATCTAGTCA TCTTCTGTAG CTACATAGTA CTCCTAATGT TAAGATTACC AAATTCAGCA 60  
25 ATAAAGCCAA AATCAAAACT GAAA 84

SEQ ID NO:4427  
SEQUENCE LENGTH:75  
30 SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05262

## SEQUENCE DESCRIPTION:

GATCATAAAC CAGTGNNAATC AGACCTATGT GTAATAAGAC TCCTGTTAAT AAAAAAATAA 60  
35 AAAGCTAAAA GCAAA 75

SEQ ID NO:4428  
SEQUENCE LENGTH:424  
40 SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05263

## SEQUENCE DESCRIPTION:

GATCTCAAAC TTGTCTTAAA TCAACAACCT TCTACTCATG TTAATGTCTT GATTAAATAT 60  
45 CACAATGCAA AATACACATT AAGTAAAAGA ATTCCAGCTG GTAAACATGA CCTGGACATT 120  
TGTAAGAATA TATTTAATAT ATGTNCACCC ATTATGTTTT TAGGTAACAG GNGGNNAAT 180  
GCANCNCAAT TTTTTTCTC TTGAAAGGCA CTGTCATTTA ANCATAAACC TGGAGTACTC 240  
GAAATAGAAT TCAGGTTTAC ANGATGAAAG CGTGTGGAGA AGTGTGAGAT GGCAGTGGNA 300  
50 GCATGTGTGT TTCTAAAANG TAAAANTCTC AAGGAAACCA NGANATGGCA TGCTTTTACC 360  
CATCTTNCCT TAGTGAAAAG NGTGCTTCAG GTTTGANATT GTTTTAAGAA AGNTAGCCGG 420

55



GNTN

424

SEQ ID NO:4429

SEQUENCE LENGTH:122

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05264

SEQUENCE DESCRIPTION:

GATCTGCTCC CTCTCGCTCT CTCACTCCAC TACTTTTGG AACAAAGTGA TGGCAGAATG 60  
 CGGTGGTGGT GGGGGTCTTT TGTACTGTTG GATTAATAAA ATGATTNAA ATTNCNNNTA 120  
 AA 122

SEQ ID NO:4430

SEQUENCE LENGTH:85

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05266

SEQUENCE DESCRIPTION:

GATCAGTATA ATTTTNAAG GTTACTTTGT NAGAGGCACA AAAGGGTTTA AACTGNTTCA 60  
 TAATAAATAT CTGTACTTCT TCAAA 85

SEQ ID NO:4431

SEQUENCE LENGTH:187

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05267

SEQUENCE DESCRIPTION:

GATCACGTAG ACATGTAACC CAGCAGCAGT TTGCTTCTGT TGTCCACTGA TTAATCAGCC 60  
 TATGTGCCCTG AACTGGTCT TGCAGTACAA CTGNAAGCCA AAACAAGGTG GAAGATGTCC 120  
 TGAATTAAGA TGTTCACAC ACATTGTATT ACAGAGACAG CCAATAAATC TACTATTTGA 180  
 TTTCAAA 187

SEQ ID NO:4432

SEQUENCE LENGTH:211

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05269

SEQUENCE DESCRIPTION:

GATCTTTTAT TTNTGAAACA CTCAAACACC TTACAAAGTG CTGAGTAGGT AATAGTGACC 60  
 CAACTTGTTT GCTAAATGAT TATTTGTTTA AATCTGTACA GTTTAAAGTG TTCACTTATA 120  
 CAAAGAGTGT ATATACTTTC AAATAATTNA AAATGCTTTA NATTATNNGG CTAGAAATTG 180  
 CNGTTTTNAA TAAATGTGAA TNTNTNAAAA N 211

SEQ ID NO:4433

SEQUENCE LENGTH:62

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05270

SEQUENCE DESCRIPTION:

GATCTGTTGT TAGGATTCTA GTTAACACTT TTNTTTTAA AAATAAGGA CAAATGAACA 60  
AA 62

SEQ ID NO:4434

SEQUENCE LENGTH:98

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05271

SEQUENCE DESCRIPTION:

GATCCCAGGG GAGGGTCTC TCTCCCATC CCAAGTCATC CAGCCCTTCT CCCTGCACTC 60  
ATGAAACCCC AATAAATATC CTCATTGACA ACCAGAAA 98

SEQ ID NO:4435

SEQUENCE LENGTH:239

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05272

SEQUENCE DESCRIPTION:

GATCGTATCC CGCTGACACA GAAGGNTGCC GGGTGGGGG AGGGCACCCA TGAAATTCAA 60  
AGAAAACCT AAGTGTGGAT GTTCAGAATT TTGGAAAAAT GTCAGTGAAG TGATTGAAAG 120  
AGTGCCTGGC ATGCAAGGNT AAGAGGTTCT TTACATAACA TTTCTAAAT GCTTAATAAA 180  
CGTTTGTTC ACTTGGTTT GACATTGCCA ATGGGGTTTG AACCAGTGCT CTCTCTAAA 239

SEQ ID NO:4436

SEQUENCE LENGTH:102

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05273

SEQUENCE DESCRIPTION:

GATCTGCAAT GACTGGAAT TGCCGGTGCC TGGGGTGCCT TTCCCCCAGC CAGGGTCCAA 60  
AGAAGCTTGG CTGGGGCAGA AATAAACCAT ATTGGTCGGA AA 102

SEQ ID NO:4437

SEQUENCE LENGTH:333

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05274

SEQUENCE DESCRIPTION:

GATCTTCTTT TGGGAGGATT TGATGTAAGT NACTGACAAG CCTCAGCAAA CCCAAAGATG 60  
TTAACAGTAT TTTAAGAAGT TGCTGCAGAT TCCTTTGCC ACTGTATTG TTAATTNCTT 120  
GCAATTTGAA GGTACGAGTA GAGGTTTAAA GAAAAATCAG TTTTGTNCT TAAAANTGCA 180

EP 0 679 716 A1

TTTAAGTTGT AAACGTCTTT TTAAGCCTTT GANGTGCCTC TGATTCTATG TAACTNGTTG 240  
CAGACTGGTG TTAATGAGTA TATGTNACAG TTAAAAANAA AAGTTGGTAT TTTATANGCA 300  
CAGTCAATNC TNATGGTAAC TTTTGGTNGT CTN 333

SEQ ID NO:4438  
SEQUENCE LENGTH:72  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear

CLONE:HUMGS05275  
SEQUENCE DESCRIPTION:  
GATCAATGTT TCAGCCCTAG ACTGCCCAAG GAGTATTATT AATTATTAAT AAATGAATTC 60  
TGTGCTTTTA AA 72

SEQ ID NO:4439  
SEQUENCE LENGTH:100  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear

CLONE:HUMGS05276  
SEQUENCE DESCRIPTION:  
GATCAGATTA TTTTACTACC AACAGTTATA GTTTGAAAGT CCAACTGTAT TAATTGACTG 60  
ATAATATGAT AATATAGAGA TTAAATTGTT TGTNTTCAAA 100

SEQ ID NO:4440  
SEQUENCE LENGTH:96  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear

CLONE:HUMGS05278  
SEQUENCE DESCRIPTION:  
GATCACAAAG AGCAAACAAA TGTCAATATC TCTTATGAAT GGTGAAAAAA AGGAATTAAT 60  
CGATGCAAAT AAACTTTCA CAGTATTACT TTAAAA 96

SEQ ID NO:4441  
SEQUENCE LENGTH:116  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear

CLONE:HUMGS05279  
SEQUENCE DESCRIPTION:  
GATCTAGCAA GCCATGGCGA CAGGTAGCAT TTNTAAGATG NTGNACAGGA GCAGNATTAT 60  
CCCCAAAGAT ATTACAGGGT AGACACGTTT TAACTAAAAT CAATCAAGNT AACTTN 116

SEQ ID NO:4442  
SEQUENCE LENGTH:411  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05280

## SEQUENCE DESCRIPTION:

5 GATCTGACAT ATATCACCTT CTGGGNTATT TACTCATTGT GCCAGGACCT GGCATTTTCA 60  
 TGTGCCTTTG ACCAAGTGT CAGAATTTGC TTGNCTCTAA CCTGGAGAGC TTCTTAAGTG 120  
 ATGCCCCCTC ATGGAGCTTC TATGACAGTG AATAAACTAT TAATTGAAGG AAAATGTTAT 180  
 AATTAANGTA TCTATTTGCT GCATTGTATA TGGATTAANT GNTAAAAAAC AAGTAATCTA 240  
 CCCTCAGAGC CATGTATTTG AGAATGCTTT CAATCATATT TNCCTATGNA CTTTTTTTTT 300  
 ATAAACTTAG TTTTANGCCT ATGTTGTAAA ANTGGGAAGG TTNGTAAACN TATGTTTGGN 360  
 10 AAAANTAGGG GAAATGTNGG CTAAANTTN TTTNCANTT ATNTTNGTTT N 411

SEQ ID NO:4443

SEQUENCE LENGTH:90

SEQUENCE TYPE:nucleic acid

15 TOPOLOGY:linear

CLONE:HUMGS05281

## SEQUENCE DESCRIPTION:

20 GATCTATCTG GGGGTCCTAG TGTACCACAA GCTGAACCTG AAGATTTGGA AAAATGTTTC 60  
 TAATTAATAA AACAGAGCA AAAAGACAAA 90

SEQ ID NO:4444

SEQUENCE LENGTH:342

SEQUENCE TYPE:nucleic acid

25 TOPOLOGY:linear

CLONE:HUMGS05282

## SEQUENCE DESCRIPTION:

30 GATCTACATT TAAGTGGAAG AATTAGCAGT ATTTGAAAGC TCAGTTTNA TCATTGTCTT 60  
 AACTTCAGAT ACAAATAACT GAACAGAAAG TTTTAACCTT TAATATCTCA TGINCTGTTT 120  
 NTTATTAGT ATTTTCCTNT ATGTTAATTC AATTATATAC TTCTGAATGG CACCTTACTT 180  
 TTTGGAACA AATCTTCTGT TATTACAAA ATAATAATTT TTANAAAACA TTTAAAAAAA 240  
 ATCCAAAGCT GCTCTCGATA ATAGCAACA TTTGCATATA TATGGAATTT CTTACTTTNT 300  
 35 TTCTCCCAAA CTCTATTTAA TAACTNATT TTAATGGTTA AA 342

SEQ ID NO:4445

SEQUENCE LENGTH:61

SEQUENCE TYPE:nucleic acid

40 TOPOLOGY:linear

CLONE:HUMGS05283

## SEQUENCE DESCRIPTION:

45 GATCACAAAA ATGTATTTTA TAAAATGTTT TGTACAATAA AGTTACACCT CAAAGTGTA 60  
 A 61

SEQ ID NO:4446

SEQUENCE LENGTH:301

SEQUENCE TYPE:nucleic acid

50 TOPOLOGY:linear

CLONE:HUMGS05284

## SEQUENCE DESCRIPTION:

GATCATTATC AGTAATTTCA TAGCAACTGT TCTAGNGTTT TGNGTTTTTA AAACAGAATT 60  
 AGGAATTTGA GATATCTGAT TATATTTTTC ATATGAATCA CAGCTGTTGA CAATGTCCCA 120  
 TATATTTAAG AAATTATATC ATACTGATAC TATTTGTAAC ATTTTGATT GATTTAATCT 180  
 CCAGGGACAG AAATAATTCA TTGGTAAAGN GTAATAATGC GTTTTTTAAA AATGCTTTGA 240  
 GAGGTAATTA CTTGCATATG AGAGAAATAA AACATTTGGC ACATTGTTA CAGGTGTGAA 300  
 A 301

SEQ ID NO:4447

SEQUENCE LENGTH:153

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05285

## SEQUENCE DESCRIPTION:

GATCAGACCG AGAAGCAGGG TGAGAGATTC TAACGACTGG ATGCTGCTAG TAACACATTG 60  
 TTTGTATTGC TTTACCATT TTAAGTGTGA GATTGAGAT GAACATACAT TTTGCTTTT 120  
 TAATAAATGT TTAAGAAG TCCACATAAG AAA 153

SEQ ID NO:4448

SEQUENCE LENGTH:216

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05286

## SEQUENCE DESCRIPTION:

GATCACTACA GTGAAGTATT ACAGTTGTAC AGTCCCACTG CTGGCCTTGG CTGCTCGGA 60  
 TAAACTTTG TATGTATTTT GTATGGCATA GATTCTATAT TGTAATGATG TCCTATGCAA 120  
 AAAGAAAAAT TAACGAAATT GTAAATTTTA TTGTTTAAAC GTGTATGCAT GTTTAGTGAC 180  
 GTTTACATTT TGAATAAAAA TTTATGATTC ATTAAA 216

SEQ ID NO:4449

SEQUENCE LENGTH:172

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05287

## SEQUENCE DESCRIPTION:

GATCTGGAAG CGTTTGTAC CGATTATCCA CAGCAAAACA AAAATAAGCT TTTATTTTAT 60  
 TAATAATTTT GTTCTCTTG TGCCCAATCA AATCTTTTAG GAACAACTG CAAGAAAAGC 120  
 TAAGAATGTT TTAGAGTGAA CTAAATACAG ACATTGCTTA CTTGTTTGA AA 172

SEQ ID NO:4450

SEQUENCE LENGTH:289

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05288

## SEQUENCE DESCRIPTION:

GATCTCCCTG TGGCAGCAGG CATGGAGAGT CAGGGCTGCC TTCATGGCAG TAGGCTCTAA 60  
 GTGGGTGACT GGCCACAGGC CGAGAAAAGG GTACAGCCTC TAGGTGGGGT TCCCAAAGAC 120  
 GCCTTCAGGC TGGACTGAGC TGCTCTCCCA CAGGGTTTCT GTGCAGCTGG ATTTTCTCTG 180  
 TTGCATACAT GCCTGGCATC TGTCTCCCTT TGTTCTGAG TGGCCCCACA TGGGGCTCTG 240  
 AGCAGGCTGT ATCTGGATTC TGGCAATAAA AGTACTCTGG ATGCTGAAA 289

SEQ ID NO:4451

SEQUENCE LENGTH:121

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05289

SEQUENCE DESCRIPTION:

GATCTCTTAA AAATACCACA GTTGTATTT TTCCTTTAAG GAGTAAAGAT TTGCCTTTAA 60  
 ATAATTGGT ATTTTCTGG CTTTCGTTA ATACAATAGA AAATAAAGTA TTACACCGAA 120  
 A 121

SEQ ID NO:4452

SEQUENCE LENGTH:293

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05290

SEQUENCE DESCRIPTION:

GATCAATGTG ACGGCAGGGA AATGTATGTG TGTCTATTTT GTAAGTGTAA AGATGAATGT 60  
 CAGTTGTTAT TTATTGAAAT GATTTCACAG TGTGTGGTCA ACATTCTCA TGTGGAAGCT 120  
 TTAAGAACTA AAATGTTCTA AATATCCCTT GGACATTTTA TGTCTTTCTT GTAAGGCATA 180  
 CTGCCTTGT TAATGTAAAT TATGCAGTGT TTCCTCTGT GTTAGAGCAG AGAGGTTTCG 240  
 ATATTATTG ATGTTTTTAC AAAGAACAGG AAAATAAAAT ATTTAAAAAT AAA 293

SEQ ID NO:4453

SEQUENCE LENGTH:336

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05291

SEQUENCE DESCRIPTION:

GATCTAGGTC CTTCTATCTC GTCCCTCTAC AGATGTATTT TCCACTTGCA TAATTCATGC 60  
 CAACACTGGT TTTCTTAGGT TTCTCCATTT TCACCTCTAG TGATGGCCCT ACTCATATCT 120  
 TCTCTAATTT GGTCTGATA CTTGTTTCTT TTCACGTTT CCCATTCCC TGTGGCTCAC 180  
 TGTCTTACAA TCACTGCTGT GGAATCATGA TACCACTTTT AGCTCTTTGC ATCTTCCTTC 240  
 AGTGTATTTT TGTTTTTCAA GAGGAAGTAG ATTTAACTG GACAACTTTG AGTACTGACA 300  
 TCATTGATAA ATAACTGGC TTGTGGTTTC AATAAA 336

SEQ ID NO:4454

SEQUENCE LENGTH:252

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05292

SEQUENCE DESCRIPTION:

GATCTGCTGC AACCATATC TTNGTTCTTG AGTTCATCAT GCATTAAAA TGAGATGCAA 60  
 GAGCATTTAG CATACCATGT AAATATGGAC CTTTTAAAT TAAATACTA TTGGAAGTGC 120  
 TTTCAACTCA GCCACATCTT AGCTATTAGT TCTTTGTGTT GTCTTATCAA AGTTAATGG 180  
 ATACAGTTCC ACAGTTGTTG ATGTGTTTGT GTGTATATTC GATTNNNNNA AAGATGGTAG 240  
 TAAGTCAATA AA 252

SEQ ID NO:4455

SEQUENCE LENGTH:57

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05293

SEQUENCE DESCRIPTION:

GATCATACCA CTCCACTCCA GCCTGGGCAA CACAGCGAGA CTCCATGCTC CCCCCAA 57

SEQ ID NO:4456

SEQUENCE LENGTH:564

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05294

SEQUENCE DESCRIPTION:

GATCAGGCTC TCCTCATGCT GTTTAGTGAT GGCAGTGTCC AGGTGAACTN CTACGGGGAC 60  
 CACACCAAGC TGATTCTCAG TGGCTGGGAG CCCCTCCTTG TGACTTTTGT GGCCCGAAAT 120  
 CGTAGTGCTT GTACTTACCT CGCTTCCAC CTTCCGCAGC TGGGCTGCTC TCCAGACCTG 180  
 CGGCAGCGAC TCCGCTATGC TCTGCGCCTG CTCCGGGACC GCAGCCAGC CTAGGACCCA 240  
 AGCCCTGAGG CCTGAGGCCT GTGCCTGTNA GGCTCTGGCC CTTGCCTTTG TGGCCTTCCC 300  
 CNTTCCTTTG GTGCCTNACT GGGGGCTTTG GGCCGAATCC CCCAGGGAAT CAAGGGACCA 360  
 GCTTTACTNG AGTTTGGGN CGGGNTTGT TTCGNTGGNT TCCTACCCCA TNTCCAAGAT 420  
 AAGCCTTNAG CNTTAANTCC CANGNTAGGG GGCCTTATT NATGGACCA TTTTAAATT 480  
 ATTNTAAGAA ANTTNTTTA NTTGGGGATT TTAAGCCCA AGGGGGGCC TCNTCCTNAG 540  
 GTNANAAAAA AATTTTTTAA GAAA 564

SEQ ID NO:4457

SEQUENCE LENGTH:112

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05295

SEQUENCE DESCRIPTION:

GATCTTTATT TTGATTAAT TTGTTCTGAT TTTTGGTTT GTTTTTTAAG GAACTGIAAT 60  
 GAACAAATGT CAGGATATCC AATGCCAAAT AAAGATGTTG TATTTATTTA AA 112

SEQ ID NO:4458

SEQUENCE LENGTH:152

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05296

SEQUENCE DESCRIPTION:

5 GATCACACCC NGGTGAACCC ANGGTGCTAA GANTGAAAAT AACCTTGGTG AAATGTACAA 60  
 NTTAAAGACA AAGAACTACA TGTGAAGATA GACTTGCTTT CTATTTTNAATCAGTAGTA 120  
 GTACTGTTGC TGAATAATAC TAGGTTTTNN CN 152

10 SEQ ID NO:4459

SEQUENCE LENGTH:323

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05297

15 SEQUENCE DESCRIPTION:

GATCTGGTGC TGCTTTCAGA TGTTTATCTT TTATTTTTTT CCCTTAAGCT TTAATCTTCG 60  
 TCATTGTCTT AAAGTCAACT GGTGTTTCTT GTTCATTGAC TTGGGTACGA TGGTGCTTTG 120  
 CAAGGATGTA TTTATGTTAT AATGGCCAAC ATTTGGTCAG CCCTTGTCCTA CTTATTCCT 180  
 20 TCCCTCCNTT TGTAATAATA GTGCTTTAAT TATAAACTGT ATAAAAATAC CTTGTATAAA 240  
 CCCCTTTTTT GATTATTACA ATAAATAAGC TGAATTGTAA CAAATGAAAT TTGATTTTGG 300  
 TAATAAAACA GTGGAAAAAGT AAA 323

25 SEQ ID NO:4460

SEQUENCE LENGTH:229

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05298

30 SEQUENCE DESCRIPTION:

GATCCTTTTT AGTTAATACT ATGACAGTAC TAAAAATATA TGAATAACAT TTCAGATACC 60  
 ATTATATTAA AATATTTGTG TATGTGTACA AAAGCGTTGA TAAATACTAA TCTTTAAAGT 120  
 TTGTGGAGTT CCTTTATTTG TAATATATGT GCTCTTAAAA GCAATGGGAT GTGAAATTAT 180  
 35 GAAAGTATTT TATTGTTTAT AGAAATAAAA AACACAGTTA CTTTGCAAA 229

SEQ ID NO:4461

SEQUENCE LENGTH:135

SEQUENCE TYPE:nucleic acid

40 TOPOLOGY:linear

CLONE:HUMGS05300

SEQUENCE DESCRIPTION:

GATCTGGACC TAATGAATTC CTCAGAAAAAT TCCCATGAGT CAGCTGATTT CAGTGCTGCT 60  
 45 GAACTAATTN CTGTGTCTAA ATTTCTTCCT ATTTCTGGAA TGGAAAAGGA GGNCATTCTG 120  
 AGCCACACTG NNNNN 135

SEQ ID NO:4462

SEQUENCE LENGTH:102

50 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

55



# EP 0 679 716 A1

CLONE:HUMGS05301

SEQUENCE DESCRIPTION:

GATCTGGGTA AAGGACCATC TGGGGATTCT TTGTACTATT TTTCTTTCCG CAACTTTTCA 60  
AGTTTCAAAC TATTTGCAAA TAAAGAGTTT TTGTTTGTTA AA 102

SEQ ID NO:4463

SEQUENCE LENGTH:189

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05302

SEQUENCE DESCRIPTION:

GATCACATGG CTAAGGTGGT GTGTGCCAGG TTTCTCCACT GTAAAATTAG GAATTTTCCC 60  
TTTGAAATTA ACAAGAATCT TCCACTTTGA AGCTGTGTGA ATGTCTTATT CTTAAAAATT 120  
TGCCTACTGA TTTNANNNN CATCATCAAT GATTCTTGCT TATAACAGGT ATTAATGTTA 180  
TGCTTGAAA 189

SEQ ID NO:4464

SEQUENCE LENGTH:364

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05303

SEQUENCE DESCRIPTION:

GATCATGTTA ATTTAAAGCT TTATACACAT TGTGTTTTTT GCTGGTCTCA TCTTTGGTAA 60  
TATGCTATAC CCCACTGCTG CCCGACACTG CCCTNTAGCT GCAGAGCTGG ATTAGCTGTT 120  
GACCATTTGA TGCTGTTGTC TGTCTGGCAG GGAATGAATG ACCTGATGTC AGATTTAGAT 180  
TCTTCCTGGG GATTACACAG CTATGAATGT ATTTGCTTCT AAAACCTCCC AAAGTGAATC 240  
TAATCTTAAA ACTACAAGTT GTAAGTATTC TGAAATTGGG AAACATTTAT NTNAAATGCA 300  
ATCAGGNAG TGTGCTTTT TACAGCATAA TNAATATANG TNTCAANNAN NGTGGANGGT 360  
NGTN 364

SEQ ID NO:4465

SEQUENCE LENGTH:229

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05304

SEQUENCE DESCRIPTION:

GATCACTTGA TGTCAGGGAG TTTGAGACCA GCCTGGCCAA CATGGTGAAC CCCATCTCTA 60  
CTAAAAATAC GAAAATTAGC TGGGTGTTGT GGTAGGCACC TGTAATCTCA GTTACCTAGG 120  
AAACTGAGGC AGGAGAATCA CTTGAACCTG GGAGTTGGAG GTTGCAGTGA GCCAAGATTG 180  
TGCCACTGCA GTCCAGCCTG GGTGATGAAA CAAGACTCTT TGTCTCAA 229

SEQ ID NO:4466

SEQUENCE LENGTH:496

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05305

SEQUENCE DESCRIPTION:

5 GATCTCTAAG GAACCTCTGT TGCTAAATAT GAAGAGTATG GAACATTCAT ATAGTCTCTG 60  
 TGAAGCATGG GGGGAGGGAA GACATTTCTN TTNCTTATAG GCTTTATGCT CAAATGTCAT 120  
 AGTCTCCTTT CAAAGAATTG TGTTCATTT TAAATGCACC CAGCTTAAGT AGAAGACATT 180  
 GAAGGATGCA TTAATTTTCA GGAACATTTT TGGATTATGA AAAGATTCCC AATTGAAAAA 240  
 ATTATTCAAC AAGTAAAAGC TAAGAAATTN CATTGAAATC ATAATGGCAG TTAAAGCATA 300  
 10 AATTGATAA ANAATAGCTG TGTACTACTA AATTAATTAG GAAAATTCNA TTCCAANCCC 360  
 AAGNNGAAGG AGTCCANGGT GGAAATATCC GGTTCGGTTT TATTTGNNC TTAGNTGAN 420  
 GTTTCCTTT GGTNAACCGN TTGNNTTTT TATTAAAT NGNTTAATTA TTTTNGGTT 480  
 AANGNTATGC CCCNTN 496

SEQ ID NO:4467

SEQUENCE LENGTH:415

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05306

SEQUENCE DESCRIPTION:

20 GATCTTGGGA GATATTAATA TCTGCTGGCC AGACCTAAAA AAACTGAAG GCCCAAGGAA 60  
 AGTGACTGGA CTCACTGGAA AGTNTCTAAC AAATACTTTG GATTCCAAAG TATTTCCAAT 120  
 25 ACCTTGAAGA TTCCTTTGAA AACATCAAAG CACAACTCA AATCTGCACA AGATTACAAA 180  
 AGCACAAATT TGGTGTATT TTTAGANTNC AATACACAAA GCTATTGTTC ATTTCTNTCA 240  
 GCAAGCATT TCCTGGGTAG TAGTAATAGC TTAGGAATCA AATGCCACTT TTNTTTTCC 300  
 TTTTTCAC TAGTTTGAAG TACCACAANT NACAGGTNAG TCAGTCTCC CAGAGGNNA 360  
 NGGNCAGTCC TAGGGNGNA TCAACAGGNC TNGCAAGNCA AGNCCACAA NTTN 415

SEQ ID NO:4468

SEQUENCE LENGTH:209

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05307

SEQUENCE DESCRIPTION:

35 GATCGCAAAT TGAAATATGG ATATTTGTAC CAGGCTGCGT GTTTTTCATT TAAACACAC 60  
 AAGATTTAAT TGAAAGGACA TCAATAATCA TAATTGTGTA TTTAACAGGT GGTNTNTAT 120  
 40 TAGTTTTCTN GTGTTTCAGA CTTTATGCAG CCATATAAAC TGTCTCTAG GCATGCTGTG 180  
 ACATTTTAAT AAAAAGCAAA AGGAGCAAA 209

SEQ ID NO:4469

SEQUENCE LENGTH:353

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05308

SEQUENCE DESCRIPTION:

50 GATCGCACCT TTTATACCAG AGACCTGAGG CAGATGAAAT TNATTTCCAT CTAGGACTAG 60  
 AAAAATTGG GTCTCTTACC GCGAGACTGA GAGGCAGAAG TCAGCCCGAA TGCCTGTNAG 120

5 TTTTCATGGAG GGGAAACGCA AAACCTGCAG TTCCTGAGTA CTTTCTACAG GCCCGGCCCA 180  
 GCCTAGGCCC GGGGTGGCCA CACCACAGCA AGCCGGCCCC CNCTCTTTTG GCCTTGTGGA 240  
 TAAGGGAGAG TTGACCGTTT TCATCCTGGC CTCCTTTTGC TGTITGGATG TTTCCACGGG 300  
 TCTNACTTAT ACCAAAGGGA AAACCTCTCA TTAAAGNCCG TATTCTTCT AAA 353

10 SEQ ID NO:4470  
 SEQUENCE LENGTH:64  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05309  
 SEQUENCE DESCRIPTION:  
 15 GATCCTCTAA CACTGTACTA AAACATTCA ATAAATCAT TCTGACTGCG TTCATAAAAA 60  
 CAAA 64

20 SEQ ID NO:4471  
 SEQUENCE LENGTH:169  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05310  
 SEQUENCE DESCRIPTION:  
 25 GATCTATTAC TGACCGTATG ATGAGGCCAA CTTTTTNCC TTGTGGTTAG CAAGACTGCA 60  
 AGAGATGGAA AAAAAGTAGT TTGAATGTTT TGTGTGTAAG GAGTATACCA TGAGATGAGA 120  
 TGACCACCAA TCATTTCCTT GGGGGGAGGG GGTGTCTGCA CCNTAGAAA 169

30 SEQ ID NO:4472  
 SEQUENCE LENGTH:132  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05311  
 SEQUENCE DESCRIPTION:  
 35 GATCACTTGA ACCCAGGAGT TTAAGTCCAG TCTGAGCAAG GCAGTGAGAC CCTGTCTCTA 60  
 AACAATAAAA ATTAATAATA GTATTATCGA GAGTTCCTGG AGGGGTGAAA TTAAAGACTT 120  
 TCAAAACTTA AA 132

40 SEQ ID NO:4473  
 SEQUENCE LENGTH:328  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 45 CLONE:HUMGS05312  
 SEQUENCE DESCRIPTION:  
 GATCACCAGG CTGCCCAAGG GTGCTGTGCT CTACAAGACT TTTGTCCACG NGGNTCCTGC 60  
 CAAGCCTGAG GGCACCCGTC AAACCTGGTAG CTATGCTTNG ATGTCCTGTT GAGGCCATCG 120  
 GACAGAGACT GGAGCCANG TGACAGGAGA TGGTGATACC AGAAGTCAAG GGTGGGGTG 180  
 50 GCGACACGGC CTCCCAGGA AGAGGTCTGC TTGATGGTGA CTCTGCAGGA GACTCTGAAG 240  
 TGACTGCTGG GAAACCTTT GGGAGACCTN ACCTGNGGCC AAAANTAAAG TNNGCCAGCN 300

55

TCATGAACCG CATNCTATTT AAGGGAAA

328

SEQ ID NO:4474

SEQUENCE LENGTH:307

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05313

SEQUENCE DESCRIPTION:

GATCTGGACA TGCTGTNACA AGAAATAGTG ACCTTGGGGA ATATGTACAG AAAAGACCTT 60  
 TTTCTAAGAG TTGGGAGGGG GTGGGGGACT GTATAATGAA AAGAATTAGC TTACAAAAAA 120  
 GAAATTGATA TTCAAAGTAT TTTAGGCAAA GCCAGTCAAA ATGCTTTCAT GATATTTTGA 180  
 GATGTAATT TTGTCTGATT TGTATTGTNC TTTTCATTG CCTTCTTAAC TTTATATGTG 240  
 ACCTGAATTT TCCATAACTT GATGACTATA GATTGCACCT AGGCATTCCA ATAAAAGCCA 300  
 ACCCAAA 307

SEQ ID NO:4475

SEQUENCE LENGTH:133

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05314

SEQUENCE DESCRIPTION:

GATCGTAAAA ACATGTCCTTA TGCGGAACCT TCATGTCAGA TGCCTGGAGT GTGAAGTGTT 60  
 CATTGGACAT TCCATTTTAC TGTTCGAAGT ATGGACTTAC ATATCAAATT AAAAGGCTCT 120  
 TTTGTTCTGC AAA 133

SEQ ID NO:4476

SEQUENCE LENGTH:130

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05315

SEQUENCE DESCRIPTION:

GATCAACTGT CCTTAACCAC AGCAGCATGA TACGCTGGNT TACCCAATCG CTTGTAAGGN 60  
 AAGNCAGAGA TGACGTTATC CTGACTGCTG AGATGAGCAG TTTACCCTAG GAGGNCCNAT 120  
 TNGGACTATN 130

SEQ ID NO:4477

SEQUENCE LENGTH:105

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05316

SEQUENCE DESCRIPTION:

GATCAGCCAC ACAACTGTTT TGTACATACT TATTTTCTCA TGCACTTTTT TGTATGCAAA 60  
 TAAAGCTATA AATTTACTCA TTTCAATAAA CTGGAGTGGC AGAAA 105

SEQ ID NO:4478

SEQUENCE LENGTH:159

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05318

SEQUENCE DESCRIPTION:

GATCTGGGAC AGANTTCACT CTCACCATCA GCAGTCTGCA ACCTGAAGAN TTNCAACTN 60

ANTACTGTCA ACAGAGTTAC AGTGCCCCGT GGACGCTCGG CCCAGGGACG AAGGTTGGAC 120

GTCAAACGAA CTGTGGCTGC ACCNTCTNTT TTCATCTTN 159

SEQ ID NO:4479

SEQUENCE LENGTH:170

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05319

SEQUENCE DESCRIPTION:

GATCTGAAAA GAAGGTGAAT ATTTTGCAC TTTGATACTC TTAGGAACAA ATAATTATT 60

TGGCAAATTG TTTNTTTTT ATGTTTTGGG TGTGTTTTT GTTTTTTGAC TTTTTTGTA 120

TTGTGAACAG GCACTGAAGC TGATGTTATT TTAAGATTAC AGAATGGAAA 170

SEQ ID NO:4480

SEQUENCE LENGTH:73

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05320

SEQUENCE DESCRIPTION:

GATCATGTAA AATTACAGTA CTCAACCCTT CTAGCAAAGT ATTTGGNTGA AAAATAAACT 60

AAATGCCTTT AAA 73

SEQ ID NO:4481

SEQUENCE LENGTH:130

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05321

SEQUENCE DESCRIPTION:

GATCCGCAGA GGGTGGTTGG GATACACCGG ATACCTCTGC TCTCATTGCT TGTTTCCAAA 60

TGCTCTATGG ACATTGTGT GCTAAATCCT ATTAAATAAA AAAGACGGGT TAAACCCAG 120

ATGCTGTAAA 130

SEQ ID NO:4482

SEQUENCE LENGTH:56

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05322

SEQUENCE DESCRIPTION:

GATCAAATTG AGAGACAATA AGTGACATT GTTGAATAAA AAATTTTAAA GTTAAA 56

EP 0 679 716 A1

SEQ ID NO:4483  
 SEQUENCE LENGTH:90  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05323  
 SEQUENCE DESCRIPTION:  
 GATCTTGAGA GTATGTTCTT ACTCATTTCT GTAATTGCAG TAGTGTAGTC ATCTGCATAT 60  
 AGTTTAAATA AATGCATGTT AAAATTAAA 90

SEQ ID NO:4484  
 SEQUENCE LENGTH:58  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05325  
 SEQUENCE DESCRIPTION:  
 GATCACGCCA TTGCACTCCA GCCTGGGGGA CAAGAGTGAA TCTGTGTCTC ACCAGAAA 58

SEQ ID NO:4485  
 SEQUENCE LENGTH:115  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05326  
 SEQUENCE DESCRIPTION:  
 GATCTGGTGA CTGTNCTCTC CCTGTTTTCC TTCTTTTTTG GGTGTTTGAG GAGCANNCT 60  
 TAGCTTGAGA CACACACAGA CACTGTGTAC TTCAGTNAAG GGCTTAATAN ACAGN 115

SEQ ID NO:4486  
 SEQUENCE LENGTH:201  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05327  
 SEQUENCE DESCRIPTION:  
 GATCATTCT ATGIGTGTGG GTAATCTGGT CAGTAAGATT GAGACTTAGT TAAGATTCCC 60  
 CTTGGAAATT CCTTAATGTT TATTAGCTTC TAACTAGTGT TGTAAGTCCG ATGCCAGAAT 120  
 TTGGAGATT GAGTTCTTCT TTTCATGGCT TTTATTCACT GTGACTAATA AGCTTCCTAA 180  
 TAAATCCTTG CCAGACTTAA A 201

SEQ ID NO:4487  
 SEQUENCE LENGTH:274  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05328  
 SEQUENCE DESCRIPTION:  
 GATCTAGTTC GTGTATAACT GTTAACTCAT TTTACATTTT TTNCTTCGTT GAATGTTTAT 60

EP 0 679 716 A1

CAGATTATAA ATATAGAGGC ATTTCTNCAT CCTGTTTAAT GTTTATTTTG TAATCATTGG 120  
 AGTATGTGAA AAATTTTNGT TTGTTTGTCT TTGGTCTCTA AGTAAACATG TTCAGCAAAG 180  
 TATTTNTNTT TTNAAGAAAT AAATNGNGNT TTGTATGTCC TNCCTTTTAG GTTTGAGGCA 240  
 AAGAGGAGAT GGGAAANCCAA AGGCAACANG GGNN 274

SEQ ID NO:4488

SEQUENCE LENGTH:332

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05329

SEQUENCE DESCRIPTION:

GATCTNTGCC ATGCAGAGCA TCTTCCAGAA GACCAGGACT CTGGGAGGCG AGGAGAGCTG 60  
 AGCTGGGCCA CCTGGTCTCA GCCACCTGTT CTTGGCTCCC CAACAGACTC TGCACTGCAC 120  
 CATGGGAGGC TCCTGGGATG TTTGGAAGAA GAAACGGGCT TCTCCTTGAG GGGGTAGTGG 180  
 AGGGATTTTT TCCCCAGCAG TGGCCTCTGA GAGTNNNTCA GTGCCTGGTG GGGCAGGGCA 240  
 GGCCTCTTGG AGCACCTCCT CCCTGGNTCA GGGCCTGGAT GCAGGTGCCA AGCTCTCCAT 300  
 GTGGTGCATG TTNGACCCAG CCACGTGGTG AN 332

SEQ ID NO:4489

SEQUENCE LENGTH:155

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05331

SEQUENCE DESCRIPTION:

GATCTTAAC ATGAGTAATT CACTATCAAG AGCTAATTAT TTGAAAAAT ATAAGATGTT 60  
 ATGGAGCAGA TAGCTCAAGC AGTTAAAGA AATTNTGCAA CTNTAATTCT NTTCTTATT 120  
 TTAATACTAC TACTTAATAA ATAGTATTTG CTAAG 155

SEQ ID NO:4490

SEQUENCE LENGTH:115

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05332

SEQUENCE DESCRIPTION:

GATCAAAATCA GAGATTGACA GCCTGTGGAG GGTGCTGAAC TATACAGAAT TAGACACAAC 60  
 TATGTCATTA TTTTGTGAC CTAAGTNTCA GAATAAAAC ACTTGAAATA TGAAA 115

SEQ ID NO:4491

SEQUENCE LENGTH:197

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05333

SEQUENCE DESCRIPTION:

GATCCCTTCT GTTGGTGACA TGTTGTAAAC ATTTCTTTCA ATAACTAAA GAAAAATTAT 60  
 TAAAGGAACA CATACCTTTG GTTAAATAGT CTAAGTAAA AGATTGAGAA GTTACTTTCC 120

ATTGCTATCT ATTGATAATT TAGACATTGA GTTCAAATTG CCTTCATTTT ATGATAAATA 180  
ATGATTTAAC TGACAAA 197

5 SEQ ID NO:4492  
SEQUENCE LENGTH:79  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
10 CLONE:HUMGS05334  
SEQUENCE DESCRIPTION:  
GATCATTTTT ATTTGTAAA TATTACCTAA CTTTACATAA ACTATATCAT AATAAACTAT 60  
TTTTGCATCA CCCTTTAAA 79

15 SEQ ID NO:4493  
SEQUENCE LENGTH:377  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
20 CLONE:HUMGS05335  
SEQUENCE DESCRIPTION:  
GATCTCCAAG CTGAAACTTA CACGTAAAA CTTTTGCTG TAAGAATTG CACATGAATG 60  
TTAATGGAAA ACACAAAAC TAAGATGGCC CAAAACNAAA GCCACAAACA GTTCATCATT 120  
25 TGGTGCTTAG TCTTTGTAAG GGCTCTCTGT GGTTCGACTT ACTCCAGCTA CCGTTAGATG 180  
AGGGCAAATC ACCTTAGAAC ATGTTTCATT GATTCATAAC ANGGAATAATT GGGTCTATGA 240  
TTTTTNGCCA ATCTTAGCCT AAAAGAAATT GCTTTAGCTT CTGGTCAGCA CTGATTAAAA 300  
TGTGAATAGT GAAGTGGCTA TCCTAAACTG GTTTATCTCC ACCCACAATA TCATAGANTT 360  
CTTAGGTAAT ACAATTN 377

30 SEQ ID NO:4494  
SEQUENCE LENGTH:170  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
35 CLONE:HUMGS05336  
SEQUENCE DESCRIPTION:  
GATCAAACAC ACACACCTAT ACACATACAT ATTAANATGC AGAGGATTTT AAATAATTGC 60  
AAATGTCTTG TGGCTGTTTT ATTTCTACAA AATTCTGTAA GATGTATACC AGAAAACATA 120  
40 ATAAAGATAA GCTCAGTTCT TCATTGGGNA AAANTATTTT TAAGNNNNNN 170

SEQ ID NO:4495  
SEQUENCE LENGTH:57  
45 SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05337  
SEQUENCE DESCRIPTION:  
50 GATCTGTAAT GTGTCAAAGC ATTTTTCAT TTTCAAATAA AGATACCTAT AATGAAA 57

SEQ ID NO:4496

55



SEQUENCE LENGTH:373

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

5 CLONE:HUMGS05339

SEQUENCE DESCRIPTION:

GATCAGAATC TNCCAAC TTT AGAGGTGCAA TGAAGACAC TACGCTACTT GGTGAGCCT 60  
 GGTGAAGAAT GTATTAATGA GACTNCTTTG CATAAACTG GGAAGAAAGA GAAGACAGTT 120  
 10 GGAGATGGAA GATGGTTTTN TATATATNTN GGAAC TTTAG TTCCTCTGTA AGACGAAAGA 180  
 GGAGAGCTAT GTTTNNTNTC ACATTGTCTG ATATATATNG TGTACCTGTC AGGTGAGTTG 240  
 ATTTAGACAN CATAGCTGAC CTTTTATGAC ANGGCAGTTT GANTAGGGNC TATTGTAATA 300  
 CCCTCACACA TTATAGGGGC ATCAGAGNAT GGCCATGGNA GGGACAGTCT TACAGGGGGC 360  
 TTTANGNGN CCN 373

15

SEQ ID NO:4497

SEQUENCE LENGTH:368

SEQUENCE TYPE:nucleic acid

20 TOPOLOGY:linear

CLONE:HUMGS05340

SEQUENCE DESCRIPTION:

GATCTGAAGA AGTTGCTGTT CTGAAACAGA AGTTGGAGCG ATGTCATTCT GCTGAGCTTG 60  
 CACTTAACGT AATCACGAAG TAGAGGAAAG GCTATGNAGT TGATGATTAC GTCTCAAAGA 120  
 25 AATCCAAACA TGAGGAGGAA GAATGGACTG ATGACGACCT GGTAGAATCT CTCTAACCAT 180  
 TTGAAGTTGA TTTCTCAATG CTAAC TAATC AAGAGAAGTA GGAAGCATAT CAAACGTTTA 240  
 ACTTTATTTA ANANGTATAA TGTGAAAACA TAAAATATAT TANNCCTTT CTATTGTTTT 300  
 CTTTCCCTTT CACAGTAAC TATGTNAAA TAACCATCTT TCAAAGGGC TANAANNAN 360  
 30 ANANNTNN 368

30

SEQ ID NO:4498

SEQUENCE LENGTH:150

SEQUENCE TYPE:nucleic acid

35 TOPOLOGY:linear

CLONE:HUMGS05341

SEQUENCE DESCRIPTION:

GATCACATCA CCTCTCTGCC TCAGTTTCCC CATCTGTAAT ATGGGAGAAT AATACTTGCC 60  
 40 TACCTACCTC ACAGGGGTGT TGTGAGGATT CATTGTGAAT TTTT TTTT TTTT TTTT TTTT 120  
 GNGTTTTAAN GNNTAAAAAN CAGTNAATN 150

40

SEQ ID NO:4499

SEQUENCE LENGTH:109

SEQUENCE TYPE:nucleic acid

45 TOPOLOGY:linear

CLONE:HUMGS05342

SEQUENCE DESCRIPTION:

GATCTCCATC ATTTCTTACA GGTTTCTCTC CCTCAAGCAA TTCGACATCT CAAGTGAAGA 60  
 50 CATGGCCCT GAAGGGCAAT AAAGCTGCTA GTTTATTAAT ACAGTCAAA 109

50

55

SEQ ID NO:4500

SEQUENCE LENGTH:315

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05343

SEQUENCE DESCRIPTION:

GATCTACAGG NCAAGGGAG GGAGCAAGCC CTACTCGGAT GGGGCACGGA CTGTCCACCT 60  
 TTNCTAATGT GTGTTGTCAG CCTGTGCTGT GGCATAGACA TGGATGNGNG GACCACTTG 120  
 GAGACTGGGG TGGCCTCAAG AGCACACAGA GAAGGGAAGA TGGGGCCATC ACAGGATGCC 180  
 AGCCCCTGCC TGGNTTGGGG GCACTCAGCC ACGACCAGCC CCTTCCTGGG TATTATTCT 240  
 CTATTATTG GGNNGNGNTG AAGAGGCATC CTGCCTGGNT GGGNCAGCCC CTCAGCCCC 300  
 TTNTNCCCTN CCCGN 315

SEQ ID NO:4501

SEQUENCE LENGTH:157

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05344

SEQUENCE DESCRIPTION:

GATCAGACTG TTGCTTTCGC ATGNTGTATG TAGTGCTCA TGNCTGGAGT TTGCTTTGTT 60  
 TTATAGTATC TGTACTCCTT GTATTTTCA AGAGCTATTT TGTAACAGA TGATGTATTT 120  
 CTCCATTGAA AACACAATAA AAAAAANCA GCACAAA 157

SEQ ID NO:4502

SEQUENCE LENGTH:397

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05345

SEQUENCE DESCRIPTION:

GATCTAGTCT TTAATTTTCA TTGTTGTGA GGTCCATTCT GTTTACTAGA CGGATGTTAA 60  
 TAAAACTAT GCGAGCCTGA NTGANTTCTC AGCCAAATTT AGTCTTGNT CTCATCTTGA 120  
 TTGGNTTAAT TCCAAATTCT AAAATGATTC ANTNCACAAT AGCTCTAGGG GATGANGAAT 180  
 TTGCCTTACT TTGCCAGTT CCTAAGACTG TGAGTTGTCA AATCCCTAGA CTGTAAGCNC 240  
 TTCAAGGAGC AAGAGGCGCA TTNCTCCGT GTCATGTAAT TNNCTAAGG TGCTTGGCAG 300  
 CACTCTGTAC CCTGTGGAGT ACTCAGTACC TNTGGTTGA NGTTGCTGAC AAGACCTGAA 360  
 AAAAAATCCCT TAAAAANNA ACCCTTTAAG GTGTGGN 397

SEQ ID NO:4503

SEQUENCE LENGTH:84

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05346

SEQUENCE DESCRIPTION:

GATCAGACTT GTTAAGTATG CCGCAAGTAA GAGCTAATTC ATTCATTCCA TGTNTGCCAC 60

TAAATAAAGA GATTGAGCAA GAAA

84

SEQ ID NO:4504

SEQUENCE LENGTH:316

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05347

SEQUENCE DESCRIPTION:

GATCTNAAAC CCAGACATCA AGGATAACAT CGTTGCTCAG CTGAAGCAGC TGTACCGCAT 60  
 CCTTNAACC CAGGAGAGCT GGCAGCCCAT GCAGCCCACC CCCAGCATGC AACTGCCCCC 120  
 TGCCCTGCCT CCCAGTAAT TGTNAATGCN ATCTTCTTCC TTCTNTTTTT TATAATATTG 180  
 TACATATGGA TTTTTNAGN GNTTAGATTT AACCAGCTTT TAAATCTCTC TTTNNTCTAA 240  
 CAGTGTTAGA AGTTTGTNAT TCTNCAAATA TGCCTAGATT TAAAGCTGNT TTGAATTTAT 300  
 GGNAAAAAAA AANAAN 316

SEQ ID NO:4505

SEQUENCE LENGTH:218

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05349

SEQUENCE DESCRIPTION:

GATCAAAGTG TTAGGGGAAA AAAATTCCAA AAGTAGTTAC AAGCTATATC AATGTCAAAG 60  
 TAAATNCACT TCATCAAAGC TAAGAAGTCA CAGGAATTGT NCTCAGGTTT TAAAAAAAT 120  
 TTTNCCTGAA TTCAGGAAGT GTCTTCTGAA TAGCAGCTAG CCANNTAAAG CGGTGTGTGT 180  
 GTACTGCAGC TGTAGGTGAA CTAAAAATA ATAATAAA 218

SEQ ID NO:4506

SEQUENCE LENGTH:297

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05350

SEQUENCE DESCRIPTION:

GATCAGCCAG TTACCTTCTC CATTGTNTTA GTTCTGTCAC CCATTTCGTC AAGTGACCTC 60  
 TCATCTTCTA TAAACTAATA CAGGAATTCT TTCCAAAGCA ATGTCTAAAA ACTCTTTTTT 120  
 TTAAAGTAAC AGTTTGGTAT GTTTATTGTA GATAAATNAT TTTNAGGCC TTCATTTTAG 180  
 CTAAGTTTAG AATTNATATT AGGCANCTAT GATTGAGTG GTTATNCATT GAGTAANTTT 240  
 CCACTATAAA GAATTTNATT GANCANTTGT TAAAGNATNN TGGAATGCA TGGNCAN 297

SEQ ID NO:4507

SEQUENCE LENGTH:322

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05351

SEQUENCE DESCRIPTION:

GATCAGAGCA CTGAGAAACT CCAGAGGCTT CTGGTTCACC GCCCTGATTC CACAGATGTG 60

GGTCAGAGGC AGAGATGGAA GTTGGAAATGG ACAAGCCTGC CCTCTCCTCA GCTCTCCATG 120  
 GCTCTGTCTT CAGGCTGTTT CTGCAATTTG ACATGAGGCC TGGCCCCAGG GAAACCAGTG 180  
 GGGCCTCATC TCCTCCCTGT GCTGCTCTGA GGTGGAGCCT TCTNAGGGTC AGTCCAGCTC 240  
 TGGAGNCCCT CTCCAGCTCG GTCACCAAAG CTGTCTGGTC CCAGGGCGGT GTGGAGTGAC 300  
 AGGCACGGCA GCCCAATNCN GN 322

SEQ ID NO:4508  
 SEQUENCE LENGTH:137  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05352

SEQUENCE DESCRIPTION:  
 GATCGCGCCA TTGCACTCCA NCTTGGGTGA CAGAGTGAGN CTCTGTCTCA AAAAATAATA 60  
 ATAATNAATT AATTAATTAA TTAATAAATA AACAGTGGGT TAGTTATCTC AAAAGTGGGC 120  
 TTGTTATAAA ANCNNGN 137

SEQ ID NO:4509  
 SEQUENCE LENGTH:285  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05353

SEQUENCE DESCRIPTION:  
 GATCATAAGA CTGTCATGTA AGAGGTGCTC TCCTGGCACC CAGAGAAAAG GAGCATCCTT 60  
 ACCTCCAAAA GCACAGGGAC ACAAGAGGA ATCTAAACAA ACAGGCCTCT NAGTTTCCCC 120  
 CAGTTTATTA CATTAGCTT GTTCACACTT TGCCCTATGA CATTNCTACA TCACTGGNTG 180  
 CTCTTCATCA AACCTACTAT AANNNNCATT CAAGTTCAAC TGTTTCTTTG GGCCTTNNTT 240  
 NNCTTATGGA GGCCCTCGTG TCGTGTAATA CTTNTATTNG GTNAN 285

SEQ ID NO:4510  
 SEQUENCE LENGTH:327  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05354

SEQUENCE DESCRIPTION:  
 GATCAGCAGA GTGGAGGCTG AGGATGTTGG GATTTATTAC TGCATGCAAG CTCTACAAGT 60  
 CCCGGTCACC TTCGGCCAAG GGACACGACT GGAGATTAAA CGAACTGTGG CTGCACCATC 120  
 TGNTTCATC TTGCCGCCAT CTGATGAGCA GTTGAAATCT GGAAGTGCCT CTNTTGTGTG 180  
 CCTGCTGAAT AACTTCTATC CCAGNGAGGC CAAAGTACAG TGGAAGGTGG ATAACGCCCT 240  
 CCAATCGGGT AACTCCAGG AGAGTGTAC AGAGCAGGAC AGCAAGGACA GCACCTACAG 300  
 CCTCAGCAGC ACCCTGACGC TGAGCANN 327

SEQ ID NO:4511  
 SEQUENCE LENGTH:194  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear

CLONE:HUMGS05355

SEQUENCE DESCRIPTION:

5 GATCCTCCAC TCCAGAGCAC CTGAGAAGGC CGGGACCAGA GGCCCTGTGT GATGTGTACT 60  
 CCGCAGCTGT TTGGGGTGGG ACATTTCGT ACTTCTCGAT TTGCTTATGG CTCAGCCATT 120  
 ACCTGTGTCA GTCCATGATT CTGTTGTAAC AGTTTAAAGA GTAAATAAAT AAAGCTGCCT 180  
 GATGTCCCAT CAAA 194

SEQ ID NO:4512

SEQUENCE LENGTH:106

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05356

SEQUENCE DESCRIPTION:

15 GATCACTTTT CCCTGTCTAA ACTCCAGGNT ACAGTATCCA ATANATCCAA ACAGAACTCT 60  
 GGTGTCAAAG TGTAAATAAT NGTGTAATAAT AGCCTTCCCA AGNTTN 106

SEQ ID NO:4513

SEQUENCE LENGTH:89

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05357

SEQUENCE DESCRIPTION:

20 GATCTCACCA CTGTACTCCA GCCTGGNTGA CAGAGCGAGA CCCAGACTCA AAAAATAAAA 60  
 ATAAAAACCC TGAATATCTT CCTTCTAAA 89

SEQ ID NO:4514

SEQUENCE LENGTH:366

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05359

SEQUENCE DESCRIPTION:

35 GATCTCTATA CCTCAGCTTC TTCATCTGCA AAGTGAGATA ATTGTACTAT TCTACTTTCC 60  
 TCATAGTGCN NTTATAACAG ATTATGATAA TATTACAAAG TACTTAATAC TTGGCATATA 120  
 GTATATATAT NANTATATTAG TATTTTGCAA TTTGGGGATA TTGAAAATTA GAAATTGCNT 180  
 40 GTTAGTTCAT GCTGCACTAC CATATTGTCC TTTTGGGGCT CTTCAATGGG TGAAATTCCA 240  
 TTTNACAGTT TATCATGTGC ATCTGTATCA CAGGNGTATT TTGGCAAAAT GATTCTGTNC 300  
 CAAAAAGGAG TACTATANNN NGNGGGTGCC AAATATATTG AGTCTNTTAT GGGGAAAANA 360  
 AATTTN 366

SEQ ID NO:4515

SEQUENCE LENGTH:313

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05360

SEQUENCE DESCRIPTION:

EP 0 679 716 A1

GATCTCTGGT AAAAAGCAAC ATCTGAGAAA ATTNCTTGTT TTTAGGAACC TGTGTACATT 60  
 CATACTTAAT TCTNCCAATN ATGCTTTTCA GTTTTTTGGA TTAACACTCA AAAGTAACAA 120  
 GTCCTCAAAA TTAGGTTTGT CCTGTTGTTT TAAGTGGACC TTTGGCAAGA GATTTCTAGT 180  
 5 GAAGCTTGAT TCTNAGTACT TTCCTCATGT ATTAAAAAGA GGCTGGAGGA GGGAAACCTGG 240  
 GACGTGGAGA GTGAGGAGTG ATAGCCTGAG GTTCTTGGTT TGCCAACCTG GGGAAACCTT 300  
 GTCTCTACTT AAA 313

10 SEQ ID NO:4516  
 SEQUENCE LENGTH:73  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05361  
 15 SEQUENCE DESCRIPTION:  
 GATCACTAAA CTATCTCCCC TCTTGCTGAA GTTCTTTGTA GTAATAGCTC ATAAAAATTT 60  
 GTTTATTAAT AAA 73

20 SEQ ID NO:4517  
 SEQUENCE LENGTH:247  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05362  
 25 SEQUENCE DESCRIPTION:  
 GATCTTTTAA AAAGAGATTA AACCGAAGTG ANTTAAAAGA CCTTGAAATC CATGACGCAG 60  
 GGAGAATTGC GTCATTTAAA GCCTAGTTAA CGCATTNCT AAACGCAGAC GAAAATGGAA 120  
 AGATTAAATNN GGAGTGGTAG GNTGAAACAN TTTGGAGAAG NTAGAAGTTT GANGTGGAAA 180  
 30 ACTGGANGAC AGAAGTACGG GAAGGCGAAG AAAAGANTAG AGAAGATAGG GAAATTNGAA 240  
 GNTAAAN 247

35 SEQ ID NO:4518  
 SEQUENCE LENGTH:95  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05363  
 SEQUENCE DESCRIPTION:  
 40 GATCGCAGAA CATACTGTAT TTTNACTATA TCTTTTTTTT TAAATCTGAC AAACTTTTTT 60  
 NCTTTNATTT NAATTGACAT AATTGTACAT ATAAA 95

45 SEQ ID NO:4519  
 SEQUENCE LENGTH:134  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05364  
 SEQUENCE DESCRIPTION:  
 50 GATCTGCTTT GGAAATTAAT TGCCTCTAAT ACATACCTAA GTAAACATAA CATTAAATACC 60  
 TAAGTAAACA TAACATTACT TGGAGGGTTG CANTNTCTAA GTGAAACTGT ATTTGANACT 120

NTTNAGTNTA CTTN

134

SEQ ID NO:4520

SEQUENCE LENGTH:269

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05365

SEQUENCE DESCRIPTION:

GATCTGGCAC TGAGCTTTTT GTCAGTGAAC CTTCCCGATG CCAGCTGGGC TCTTGGACTC 60  
 CCCTCTTCCT CAAGGGTAGA TGAGAGGAAC GATNNNTAGA GGTGGCTGT GGGTCCTGGG 120  
 TACCACCTTC TGAGCCTCAG TTCCTCATC GTAAAGTGG GGAGAAAAGT CTGTTGCCT 180  
 CAGGAGTGTG AGGACTACAC TAGTGAAAGC NCCTGGCGGG CAGCCGGCGA TGCCCAATAA 240  
 ATGTGTGNTT TGCTGTTTGT TAAGTGAAA 269

SEQ ID NO:4521

SEQUENCE LENGTH:189

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05366

SEQUENCE DESCRIPTION:

GATCAGTTTG TAATTTTTT NCTCCTTGAA GGCACAAAAT AATTGGTTN AGGTATGTAA 60  
 AACACTAGAG GTCAACCTTA CATAGTATAT AGAACTNATG GGTTACCCA GCTACCCAGT 120  
 AGCATAACTT TNCACAGCTC GGGGATGAAT TAACATGGCT GAAATAAAAC TAAAAGTATG 180  
 GTTTTNAAA 189

SEQ ID NO:4522

SEQUENCE LENGTH:79

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05367

SEQUENCE DESCRIPTION:

GATCAGTA CACCATATGC ACTCTGGTAC CTTAATTTTT TTTTATAAAT AATAAAAGTG 60  
 AATATTGAAG CTTCTTAAA 79

SEQ ID NO:4523

SEQUENCE LENGTH:255

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05368

SEQUENCE DESCRIPTION:

GATCTGTTGA ATTTGGGAAG CCTCCAGTTT TAATAAAATT TTTTATTAT GGTGGAAACN 60  
 TGTCTGTAAA NCTTAGGACT ATAGAAATGC AAAGAATAAA GANCTGAGGG AGTTACACAC 120  
 ATTTGTAGTC AGAAATTAAG TTCAAAANAT AATTTAGGTC ATTTGCATTT TTTAGTATGC 180  
 AAAATAAATG GAAAANTTAA NGTGCAATAN ANNTATAATT NGGGAAATGA ATGCAGTAAA 240  
 NTTGANAACA TTGAN 255

SEQ ID NO:4524

SEQUENCE LENGTH:51

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05370

SEQUENCE DESCRIPTION:

GATCTGTCAG GGCCACTTAG TGATAATAAA TTCTTCCCAA CTGCAGACAA A 51

SEQ ID NO:4525

SEQUENCE LENGTH:353

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05371

SEQUENCE DESCRIPTION:

GATCCGCATC GACTTGGCCG TGGGCGACGT GGTCAAGACC TGGCGTTTCA GCAACATGCG 60  
CCAGTGGAAT GTCAACTGGG ACATCCGGCA GGTGGCCATC GAGTTTGATG AACACATCAA 120  
TGTGGCCTTC AGCTGCGTGT NTGCCAGCTG CCGAATTGTA CACGAGTATA TCGGGGGCTA 180  
CATTTTCCTG TCGACGCGGG AGNGGTCCCG TGGGGAGGAG CTGGATGAAG ACCTCTTCN 240  
GCAGTCAACC GGGGGNCATG AGGNCITCTG AGGGCTGTTT GATTGCCCCT GCCNTGCTNA 300  
ACAACTGTN ACAGGCACTT CCAAGGCCAG AACCACAGGG GCTNACTNTC GAN 353

SEQ ID NO:4526

SEQUENCE LENGTH:174

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05372

SEQUENCE DESCRIPTION:

GATCTGGAAT AATTATGGTA AAATAATAGT ATTTGCTAAG ACTAGATGAT TGGTGTACTG 60  
GATTTTCATCC GCTATTTTCT AAGTTTGTTA TGAACGCTTA AAATATATAT GTATGTAGTA 120  
AAATTAATGT AAATTGTAC AAATAAAAT AAATGGCATG TGATATATGG CAAA 174

SEQ ID NO:4527

SEQUENCE LENGTH:201

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05373

SEQUENCE DESCRIPTION:

GATCATGTGT TTGGGGGCTT TTAGGGGACC CAGCTGCACT GGGGCACTGC CCGTGGCCTG 60  
GGTAGGACAT TTCCAGCAA GGGCTGGAGG AGTTGCCGTG CCTTCAGCCT GAATCGAATG 120  
TCAGAACCAG CCAGCGGTGC TTCACCTCT TGGGGATAAC TTGCTTAGTT TTTTAATAAA 180  
TGTTCTGGT TGGTTTCAA A 201

SEQ ID NO:4528

SEQUENCE LENGTH:308



SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05374

SEQUENCE DESCRIPTION:

GATCTATGAA GCCACCAAC AAGGCCGAGG GGCTCTGGAG GCATTGCTAT GTGGGGGACC 60  
 CCAGGGGGCC TGCTCAGAGA AGGTGTCAGC CACAAGAGAA GAGCTCTAGT CCTGGACTCT 120  
 ACCCTCCTCT GAAAGAAGCT GGGGCTTGCT CTGACGGTCT CCACTCCCGT CTGCAGGCAG 180  
 CCAGGAGGGC AGGAAGCCCT TGCTCTGTGC TGCCATCCNG NNNGGNTCCT CCAGCCTCAG 240  
 GGCACTCGGG CCTGGGTGGG AGTCAACGNC TTCCCTCTG GACTCAAATA AAACCCAGTG 300  
 ACCTCAAA 308

SEQ ID NO:4529

SEQUENCE LENGTH:194

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05375

SEQUENCE DESCRIPTION:

GATCTTCTGA GCTTGTTCCT CTGCTGGGTG GGACAGAGGN CAAAGGAGAA GGGAGGGTCT 60  
 AGAAGAGGCA GCCCTNCNTT GTCCTCTGGG GTAAATNAGC TTGACCTAGA GTAAATGGAG 120  
 AGACCAAAAG CCTCTNATTN TNAATTTCCA TAAATGTGA GAAGTATATA TATACATATA 180  
 TATATNCCTN TAAN 194

SEQ ID NO:4530

SEQUENCE LENGTH:314

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05376

SEQUENCE DESCRIPTION:

GATCTTGATT GATAACTGCC ATGATATTTT GCTTTGATGT GTTCTACAT GTGGTTGCAC 60  
 ACGGTTTCAGT AAAAATAATG CTGCTATCGA GTATGCAAAT ATTGAAGTAT GATGGTTTGA 120  
 CTGTATGGNA GTGTTGTAGC AGCCTCTTGT TTTTTCCTCC ATTGCCTCTT TTTTAAAAA 180  
 ACTTATAAAG TCACTNTTNA TTTTNCCTCA GTCTTCAATG ACGAGAGCAA TATTAAGANG 240  
 ACATTGCTAT CTAATNNTNA ATCTTNTTAA ATGAAAAATT CCTATGTTCA GTAGCGTGGT 300  
 TGATGCTATT GTGN 314

SEQ ID NO:4531

SEQUENCE LENGTH:182

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05377

SEQUENCE DESCRIPTION:

GATCGAGTCA GCATAAATTT CTAAGTCAGC CTCTAGTCGT GGTTCATCTC TTTCACCTGC 60  
 ATTTTATTTG GTGTTGTNT GAAGAAAGGA AAGAGGAAAG CAAATACGAA TTGTACTATT 120  
 TGTACCAAAT CTTTGGGATT CATTGGCAAA TAATTTCACT GTGGTGTATT ATTAAATAGA 180  
 AA 182

SEQ ID NO:4532

SEQUENCE LENGTH:314

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05378

SEQUENCE DESCRIPTION:

GATCATGAAA CTGGTTTCTG TTTTATGCAG TTGTCATTG TAAAGNCTAA TAAAATATNC 60  
TCTATAATTN CTTCTAGATT ACAAAAATAT GACAATCTTG TAAGTAGCAG ACTATGGAGA 120  
AAAATGAGTT ACCTGGNGGG TCAGGTAACT TGCCAAACTN AAANGTNTGT TAGTTGAGGC 180  
AAAGTCCTAA GCAAGGTTGT GCTATCANGG CTCAGCATACT CTTGCGGGC CTTTGANTTA 240  
CCANCACTGG AANTGCCTGC CANCTAATCT GGGGTAGATT CTTTAAGGCA TTCCACTTAG 300  
CTTGCCAGTT GNGN 314

SEQ ID NO:4533

SEQUENCE LENGTH:311

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05379

SEQUENCE DESCRIPTION:

GATCAACTAA TAGCTCTGCT AGTAATTGAT TTATTTTNC TCAATAAAGT TGCATAAACC 60  
AATGACTTAG CTGCTGGAT TAATCAGTAT GGGAAACAAT CTTTGTAAA TGCAAAGCTG 120  
TTTTNGTAT ATACTGTTGG GATTTGCTTC ATTGTTTGAC ATCAAATGAT GATGTAAAGT 180  
TCGAAAGAGT GAATATTTT CCATGTTTCA TTAAGTGCA CAGTCTGTTA CAGGTTGACA 240  
CATTGCTTGN CCTGATTTAT GCAGAATTAA TANGCTATTT GGATAGTGTA GCTTTAATGT 300  
GCTGCACATG N 311

SEQ ID NO:4534

SEQUENCE LENGTH:330

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05381

SEQUENCE DESCRIPTION:

GATCGGAGGA CGACCCGAGT CCCAAGAGTG GGGTTTTGCT TTTTAAAAGG AGAGAGGAGG 60  
GGTGATGGCA GGGGAGTGGA GGGTGCCGG GCAGGTCTG CCGGCGCAGG GAGCCCTCTG 120  
CCCTTCACAC TCTCTCAA AAGAGCCTCC ATCTGTAAGG AAGCAGGTCT CCGCGAGGGG 180  
TTTCTTTCCA TGTNTTTTCC TCCTGTNGTT TTAGAACTTT TTNGAAAAAA ACNGNCCTCG 240  
TTTLAGATTT ATAGCATTGA CTTTACACA CATTACACA AGANAAAAAT CCTTNCAAAA 300  
TTCTTAAANT NNNCTGGTNC CNNCTTTNNN 330

SEQ ID NO:4535

SEQUENCE LENGTH:204

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05382

## SEQUENCE DESCRIPTION:

GATCTCAGCT CCCGTTCCCC AAGCACACTC CTAGCTGCTC CAGTCTCAGC CTGGGCAGCT 60  
 TCCCCCTGCC TTTTGACAGT TTGCATCCCC AGCATTTCTT GAGTTATAAG GCCACAGGAG 120  
 TGGATAGCTG TTTTCACCTA AAGGAAAAGC CCACCCGAAT CTTGTAGAAA TATTCAAAC 180  
 ANTAAATCA TGAATATTTT TAAA 204

SEQ ID NO:4536

SEQUENCE LENGTH:136

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05383

## SEQUENCE DESCRIPTION:

GATCACTTGG AGACTCTTTT TTTGCTGGTT TCTAGATAAC TCAGGTAAAT CAGACCTTTA 60  
 CAGAGTACAG GGCTAGGTGA NAGANTTACT GANAAATCAC CTTGAAAATC CGANGGGCTG 120  
 ATATACCCCTT NNTGTN 136

SEQ ID NO:4537

SEQUENCE LENGTH:87

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05384

## SEQUENCE DESCRIPTION:

GATCTATGCT GTGTTTGCTT ATTCTTTAGT TGAACACACT ATGAAGAATT CCAGGTGTAC 60  
 TAGTGAATGT AATTTATAGT TGCCAAA 87

SEQ ID NO:4538

SEQUENCE LENGTH:305

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05387

## SEQUENCE DESCRIPTION:

GATCGACAAC GAGGCCCTCT TCAGCTGCGA GGTCAAGCAC CCAGCTCTGT CGATGCCCAT 60  
 GCAGGCAGAG GTCACGNTGG TTGCCCCCAA AGGACCCAAA ATTGTNATGA CGNCCAGCAG 120  
 AGCCCGGGTA GGGGACACAG TGAGGATTCT GGTCCATGGG TTCAGAACG AAGTCTTCCC 180  
 GGAGCCCATG TTCACGTGGA CGCGNTTNT GAGCCCGGNN NNNGGACGGN AGCGCTGAGT 240  
 TCGACGGGAA GGANCTTGGT GCTGGAGCGG TTTCCCGNCG AGNTCAATTG GCTCCATGTA 300  
 TTNGN 305

SEQ ID NO:4539

SEQUENCE LENGTH:106

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05388

## SEQUENCE DESCRIPTION:

GATCATAAAA TGAATCTTT ATTGTATCTA CACACTCCAC ATTCTTTACT GTGTCCTACT 60

ACTGTATCTT GGCTCCANTG CTGTATTAAA CACCATCTTA AGCAAA 106

SEQ ID NO:4540

SEQUENCE LENGTH:167

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05389

SEQUENCE DESCRIPTION:

GATCCTCCTT TGCATGCAAC TGTAGCTGCA TTTAATGAAT AGTTTGAACC CTGTNAATN 60  
 CATTITTTNA AAAAGAAAGA AAAAAAAAAAC TTCGTGTATG NAACTCAAAG CATGNAACCT 120  
 TAAGATGTTG CATTCTAAAC TNACANTAAA GACCTTTCCC AANTAAA 167

SEQ ID NO:4541

SEQUENCE LENGTH:111

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05390

SEQUENCE DESCRIPTION:

GATCCATACG TGGCCGCACC CACACAGCAC GTGCTGTGAC NGATGGCTGA ACGGAAAGTN 60  
 TACACTGTTT CTGAATATTG AAATAAAACA ATAACTTTT AATGGTANAA A 111

SEQ ID NO:4542

SEQUENCE LENGTH:216

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05391

SEQUENCE DESCRIPTION:

GATCAGTTCT GCAAGATGCC CATCAACAAC AAGATGGCCC AGTGGGGCAA CAAGCCTATA 60  
 TGCTGAGCAG GAGGCAGACT TGCAGAGCTT GTTTTGTTC ATCCTGTCCG TAAGGGGTCA 120  
 GCGCTCTTGC TTTGCTCTTT TCAATGAATA GCACTTATGT TACTGGTGTC CAGCTGAGTT 180  
 TCTCTTGGGT ATAAAGGCTA AAAGGGAAAA AGGAAA 216

SEQ ID NO:4543

SEQUENCE LENGTH:103

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05392

SEQUENCE DESCRIPTION:

GATCGAAAAT AGTTGGAAAA AAGAAGAAGA GTTGCATCTC TACTGAACAT GTACAGACTT 60  
 TCTTCTTCTT ATTATTCCTT AAACAATACA GTGTAAACT AAA 103

SEQ ID NO:4544

SEQUENCE LENGTH:194

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05393

SEQUENCE DESCRIPTION:

GATCAGAACA NTNCAAAAAA TTCACACCCC CAAAAAGNC AAGCTATTAT ATGGCAATTT 60  
 CGTGATAAAA TATTCATCCT ATTTGTCCTG CATTCTAAT TTTCCCGTAA CTAGACACAT 120  
 CAGTTTTATA ATTAGGGNAA AAATACCTTN TAAAAGTAAA GCGAGCANAG GTTTCNNTTG 180  
 CANTGTTTCA TCCN 194

SEQ ID NO:4545

SEQUENCE LENGTH:108

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05394

SEQUENCE DESCRIPTION:

GATCTGGTAG GTTGCAGCAG AGAAAATAAA TGTGACTTGN GAGNCCACTC AGAGAGGGTC 60  
 CAAGGGTGAT GGAGAAGGAA GCATGGCCTG GNAGCTTGGA AGGNANGN 108

SEQ ID NO:4546

SEQUENCE LENGTH:266

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05395

SEQUENCE DESCRIPTION:

GATCTGCTCT TGCAATGGCC TCACCATCTG GNAGGAGCGA GGCCGGGCCA TCGTTGGCAA 60  
 GGGCCGAAAG GAGTCAGCGC ANCCCTGCC CACCTTTNAG CAGGACCTCA CCTTGGCTCT 120  
 GTTGCTGTCC TCCAGGGCGA GCACTTTCCA CTTCAGAGG GGGCCAGAGG GACTTTGCCT 180  
 GCCCAGTCTT TGGAGAGCTC AGTACAGGGC AGGAGCTGCT GTGGTGTTC CTTGGCAAAT 240  
 NAAAGTTTAA TTTTCGTTTG GGNAAA 266

SEQ ID NO:4547

SEQUENCE LENGTH:72

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05396

SEQUENCE DESCRIPTION:

GATCTCCGTG TGTGCATGTN ACTGTGCTGG GTTGAATGT GAACAATAAA GAGGAATGTC 60  
 CAAGTGTTC AA 72

SEQ ID NO:4548

SEQUENCE LENGTH:104

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05398

SEQUENCE DESCRIPTION:

GATCATGGGG GTGGATTCT TATGAATGGT TTAGTACCAT CCACTTTGTA TTGTCCCCGT 60  
 GGTAATGAGT GAGTTCTTAA GAAATCTGGT CATTGAAAAA TAAA 104

SEQ ID NO:4549

SEQUENCE LENGTH:74

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05399

SEQUENCE DESCRIPTION:

GATCTTCACA TCTTGGACCT TNGTCAGTTT TGCTATTCAT TATTAAACAC TAAAACTTTG 60  
GCGGTTNTTG CAAA 74

SEQ ID NO:4550

SEQUENCE LENGTH:292

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05400

SEQUENCE DESCRIPTION:

GATCTGAAAT CACATCCAGC TCCTGATGTT TTCTTCTCCC TCTGACTGCA GAGGAAGTGT 60  
TCCTACCTGC AGGAAGGCAC CTGTACACACA GGGCGTTCAC TCAGACCATC TGTGCTCTGC 120  
CCTGAGTTCA GTTGAGAAAA TCCTATTATC AAATTGGNT TTCCTGGCCC CAGAACTTCC 180  
CAAAGACCTG TAAAATGGAG GGATTIACCA CCTCACATAT GTCCAGTTAA ACAGTTTGTG 240  
GACTTGTAAC CGTCGCAGCC CANTGGTACA ACAGTAGTTT AATCACGGGA AA 292

SEQ ID NO:4551

SEQUENCE LENGTH:265

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05401

SEQUENCE DESCRIPTION:

GATCGGATGG GCAAATCCCT GCCAGGGTCT CCAGATGGCA ATGGAAGCTC CTCCTTGCCC 60  
CACTGGGAGT AGCGGCTAAA GCTGGGGGAT AGAGGGGCTG CAGGGCCACT GGAAGGAACA 120  
TGGAGCTGTC ATCACTCAAC AAAAAACCGA GGGCCTCAAT CCACCTTCAG GGCCCGGCCC 180  
ATGGGCCCCCT CACCGCTGGT TGGAAAGAGT GTTGGGTNGT TGGCTGGGGG TGCAATAAA 240  
GCTGTGCTTG GGGGTCGCTN GGA AAA 265

SEQ ID NO:4552

SEQUENCE LENGTH:173

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05402

SEQUENCE DESCRIPTION:

GATCTATGCT CTTTCAAATG GAGACTGGGA TATTGTTGTT TTAAGACCAC TGTTTTCTCTG 60  
TTTCCTCCCA AATNTTAGTC ACATATATNA TTACCCTTAA GTTGGTCACT ATCTATCTAT 120  
CTGTCAATAA TTCAGGATTA AAGTTTGAAG TGTAATTACA TTTGANTTTT AAA 173

SEQ ID NO:4553

EP 0 679 716 A1

SEQUENCE LENGTH:270

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05404

SEQUENCE DESCRIPTION:

GATCGACCAG CAGGTGGTCT ATATCCATCC TTCCAGTGCC CTCTTCAACA GACAGCCAGA 60  
ATGGGTNGTG TACCATGAGC TNGTGCTCAC CACCAAGGAA TACATGCGTG AAGTTACCAC 120  
CATCGACCCT CGGTGGCTTG TGGAGTTTGC CCCAGCCTTN TTNAAGGTCT CAGACCCANC 180  
TAAGCTAAGN AANCAGAAGA AGCANCAGCG TCTTGGNACC GTTGTACAAC CGNTATGAGG 240  
ANCCCAATGN CTGGGAGAAT ATCTCGGNGN 270

SEQ ID NO:4554

SEQUENCE LENGTH:333

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05406

SEQUENCE DESCRIPTION:

GATCGGGTTG AGCCCAGGAG GTTGTGGCTG CAGTNAGCTG TGATGTGCCC TTATGCTATA 60  
GCCTGGGCAA GAGCGTGAGA CCCTGTCTCA AAGAAGAAAA AAAGAGAAAA ATAACCTTTT 120  
TGAACAAACA GNCAAATTAG CTAGTAGTAT GGAGATGTAT ACCCTCTATT ACACACATAA 180  
AACCCTAACA AAATTCATTG NGGTGTATTA TAGTTAGTTT TGTGAATAGA GAAATAAAGC 240  
ACTGATGNTT AANNTTGGTT ACAGTGACTT TTAGAAGGNN TTNNTTGNTG GTTCACATTN 300  
GTCAGAANTT TTTTCCNNC NNGGCTGGTT CAN 333

SEQ ID NO:4555

SEQUENCE LENGTH:250

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05407

SEQUENCE DESCRIPTION:

GATCTCCCC TTCCCTTGNG GGGCACAGCT GGCCTGGGCC TCCAATCCTG CGGANTTTCC 60  
TGGGTGTGGC TTTGACCTCA GAAGTGGCTC TGGTTTGGCC TCAGGAGTGT GGCCTGGCCC 120  
AGCCTGCTGC AGCCTCCTGT GGGGGGCCCT TNATGCCACT AATCCCCNGA CCCCCCGGAT 180  
NTTNCAAACT GNACAGACAC ACGNATTGTT AAGGCCGCTT ANGGCCTCCA GCGTGCACTC 240  
TTNTTTANGN 250

SEQ ID NO:4556

SEQUENCE LENGTH:211

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05408

SEQUENCE DESCRIPTION:

GATCAATGCA NCGACGTNGG GCTCATGGCC TACCTCGGCA CCATCACCAA AACGNGCAAC 60  
ACCATGAACC ATTTTGTGAA CAANTTCAAT GTCCTCTACG ACCGACAAGG CATCGGCAGG 120  
AGAATGCCGG NGCTCTNTTT CTGATGAGGG TACTTGAAGN GGCTGATGGA CAGGGGTCAN 180

NGCAACTATC CCAAAGTGA GNGCACTACA N

211

SEQ ID NO:4557

SEQUENCE LENGTH:308

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05409

SEQUENCE DESCRIPTION:

GATCTTTTT CCATTGGTTA AACATTTAAC TCCATGNCAG ACCTTGTTTT AACCCCTCTC 60  
 ACATCATGTT CTTTCCTTTT TTGCGAGTTA TTTTGCACTA ACCAACTTTG TCAGTGACAG 120  
 ATGCGTATCT GAGGGTGTC CACACGACCN TCAGCAGGGA AGACTTCTGG GCCATGGAGG 180  
 GCCGTCTAAT ACATGGACTT ATAACTGAC TGCNTGGGCA ATGAAAAGGC CAAATTATTC 240  
 TGAATTTTT TNGAATCACT GTAAAAAAC TGATTNTTN NTGTATAGAG ANCACTTAAA 300  
 CCGTGGAN 308

SEQ ID NO:4558

SEQUENCE LENGTH:175

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05410

SEQUENCE DESCRIPTION:

GATCCAGCTG GCTCATCCCA GCCCAGGTGG GCCAATTATT CAATTTNAA GAATTTTGTT 60  
 GCAAGCCAGT TGTCAAACAC AGCCATTATA ATTATGTAAA TTTGCAANTT ATGTAAAAA 120  
 CAAGGACAAT AATATTCAA AATGCATCCC TAATTACTAC ATTTGACCAC GNAAA 175

SEQ ID NO:4559

SEQUENCE LENGTH:178

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05411

SEQUENCE DESCRIPTION:

GATCTTNACA ACTGTTTAAT CAGTTTTATT TTTGTACAGT ATTAGTGACC TAAGTNATTT 60  
 TGCTGTCCCG TTTTGTAAA TCAANTGAAA NTATAAAGA GGCTTGTGAC AGTAGGTATT 120  
 TTGTACATAT GTATATATGT TGTCCAAATA AAATTAATAA ANTGGTNAAA GGCTGAAA 178

SEQ ID NO:4560

SEQUENCE LENGTH:77

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05412

SEQUENCE DESCRIPTION:

GATCTTCAGC ATCTTTTACT TTCACCAGCG TTTCTGGGTG AGCAAAAACA GGNAGGCAAA 60  
 ATGCCGCAAA AAAGAAA 77

SEQ ID NO:4561



SEQUENCE LENGTH:203

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05413

SEQUENCE DESCRIPTION:

GATCCCAGGA ATATTGTAAA TTTCTAACT TTA CTCTGCA TTTTGTATAT CTGGCCTCTA 60  
 TTGCCCTTGA AGGTGAAGAT GAACTGTCT TTAGAAGATA TCTCTTTGAT TCTGTGATAG 120  
 AAGTCCCTCA CATCTTGTAT TAATTTTATG TATATATCAA CGGTGGTTGG TCTTTAAAAA 180  
 AATAAATCAA AAGAATANGT AAA 203

SEQ ID NO:4562

SEQUENCE LENGTH:352

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05414

SEQUENCE DESCRIPTION:

GATCAACCCA CATTAGAGTG TCTAAGGACT CCTGAGAATT CCTGTTACAG TAAACAAAAAC 60  
 TAACGTAATC TACCATTTC TACACTATT GAGCATGGAA ATCATAGTCC CCACTCTGTG 120  
 AAAACTTAAC GCTTTTGGGA AGACATTTC GTAGCATGTC AGTTTGGAGA AATGATGAGC 180  
 TACGCCCTGA TGAAGAACC GTGTTGGTGC TGCTAAGTTT AGCCATTATG GTTTGNGCCN 240  
 TTNTCTNTCT TAAGGCCCTTA TTCTTCAAC TAAAAAGNTG GGGGATTNAG GNGCCAAGGN 300  
 AGNTTGGGGG GGGGNTNNTG NAAATTAANT TTTNTGAGG GGTNGGCNTA GN 352

SEQ ID NO:4563

SEQUENCE LENGTH:210

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05415

SEQUENCE DESCRIPTION:

GATCCGCAAC CTGGACCCCA GTGAGAGGCG GTGGGCTGAC TGGGAAGNAG AGGCCCCCAA 60  
 CCTACTCAGG ATTNACAGT GTGAACTAGG CTGCCTGTGG GGTGCCCCCTT AGGCTTGGAG 120  
 AGCCCCAGAT TGGAGGCAGA CAGACTGCAC CACCCCTTCC CCCCCTGCAT CTCGAAGAATA 180  
 AAGCAAGCTG CCTTTGTA CTGGTTGNA 210

SEQ ID NO:4564

SEQUENCE LENGTH:74

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05416

SEQUENCE DESCRIPTION:

GATCANATAG TTGCTGTTTT GTAAAAATGTA ATGTATATNT GGTTTAAAGT AAAATAGGGC 60  
 ACCTGTTTCA CAAA 74

SEQ ID NO:4565

SEQUENCE LENGTH:303

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05417

SEQUENCE DESCRIPTION:

GATCCAGAAA CTGAGAAGCT TATCCGAGAG AAAGATGAGG AGCTGCGGCG GATGCAGGAG 60  
 ATGCTACACA AAATACAAAA ACAGATGAAG GAGAACTATT AACTGGCTTT CAGCCCTGGA 120  
 TATTAAATC TCCTCCTCTT CTCCTGTCC ATGCCGGCCC CTNCCAGCAC CAGCTCTGCT 180  
 CAGGCCCTT NAGCTACTNC CACTTCGCCT TACATCCATG CTGACTGNCN AGAGACTNAN 240  
 GNGGCANTAA AGTTTAATAA ATCTGTAGGT GGCNNANAGA AAAAGAAAAA AACAAAAANA 300  
 AAA 303

SEQ ID NO:4566

SEQUENCE LENGTH:109

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05418

SEQUENCE DESCRIPTION:

GATCGTGT TTAACTTTTC TTTTCCTGTT TTTATTTTGG TATTAAGTCG TTGCCTTTAT 60  
 TTGTAAAGCT GTTATAATA TATATTATAT AAATATATNA AAAAGGAAA 109

SEQ ID NO:4567

SEQUENCE LENGTH:303

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05419

SEQUENCE DESCRIPTION:

GATCTGGAGG CAGCAGTGCT GGATGGAATT GTCTAGGCTG TGGCATGTTG GTTTTGTCTT 60  
 TCTTTTCTCC TTTGATTATG TAAGAGCTAT TTCATTATAA CTTATTATGG TGATTATACA 120  
 GGCAAGAAGA CAAAAGGAG AGAAATGTA CCTCTTCTAC TGGAAATAATG TTTATGATTA 180  
 CAAGTGAGAT AAGGTATTTT NATCAATATG AAGGCAACCT TGGCTGATAA AACCTCTATA 240  
 GTGAATACTC ACATCTTTNA CTTCACTCAC TATCAATAAT AAATATATTT NCTGACAANG 300  
 AAA 303

SEQ ID NO:4568

SEQUENCE LENGTH:230

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05420

SEQUENCE DESCRIPTION:

GATCTCTTTT GTAGAGGATT TCAATGTATT TCTTTATCAT TTGAGTGTGT GTGTGATGGA 60  
 CGAATATGTG TGTGAGTTTG AGAAGCATAT CGTTCGTGTC CAGTTACTTT GCAAATTTGT 120  
 GGACATTTGT GATTGGACAG AGGGGTTTGT GCTGTGGCCT AACACTTGCC AAGTGAGGTG 180  
 TAGGTTATGC CTATATGCAA ATTAACTTC ACCTTTCTTG AATATTCAAA 230

SEQ ID NO:4569

SEQUENCE LENGTH:355

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05421

SEQUENCE DESCRIPTION:

GATCCCCAAT TGACTCAGAG TTTGAGGAGT TAGTATCACA GAATTAGATT TTTTAAAGC 60  
 ATTTGTACGT TTCCATTCCC AAATATGTAG CTGTGGTTCT TGAAACACA TCCTACATTG 120  
 CATATGGGCA TAGCAGTTTT TGACCCAGGC AGAATAAGTT AATATTAAAT TAAATATTGC 180  
 TTTGAAGATG GCGCTCTGGG CATGAGCATG GGGCTCCATG ACTTCCCTTC TATCCCCATG 240  
 AGCCCTCCT NCATCCAGCG ACAAGCCATG GGCATGCATA CAATGCAGCA AGACCAACAC 300  
 ANGNCAATA TTGAATTGNN TCATTCTATC TAAAAATTAC ATGGGGNGGG ANGNN 355

SEQ ID NO:4570

SEQUENCE LENGTH:353

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05422

SEQUENCE DESCRIPTION:

GATCAGAAAT AACGACAAA TAGTGTGAGA TGTGTTGTGA ACAGGCATGG TGACCGTGGT 60  
 CAGCGCCACT CTGTTTCTT GAAATGTGCT TCTAAGACAG AAAATGTATT TNCTCATCAA 120  
 GGGTGTCTGG AGACACAGAC CGTGACCTTG GCGCANGGTG TGCATCAGAG GCGTGTGCTG 180  
 AGAAGGGTGG TGTAAAGCTG TGGAAAATGA CTCAAGAGCA ATAAATCAGT GCCAAAGCTT 240  
 CCCTGCGCAT CTGAATAGNC ACAAGTGAAG CCCGTGTGCG CACAGTGCAG AGGCCNAGNC 300  
 TGTATTCCA GGTAGNGTGG CTTTATTTGA CTGTGAATCC ATTTACCTGT TAN 353

SEQ ID NO:4571

SEQUENCE LENGTH:266

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05423

SEQUENCE DESCRIPTION:

GATCGGGTCT ATTTACCCA ATAGTCACTT GTGTGTCCCC CGAAATTGGG ATGGGTGAGC 60  
 ACCCTTGCTG TGGGTAAAC TTCCTGTTAT TTAATCTCCC CCACGGTTTC ATTTTNTNT 120  
 TCTGTTAATA CTTAGAACTT TCTAAGAAAC TCCATGAAAT GAGGAAATAC TGTTCCTAAT 180  
 AATATGAGGA AAGANGTAA ANTGTTCATT CCANGTGGCA AGTCTTATTG GACACATTTT 240  
 ANATAAGNTC ATGCATACCT GATAAA 266

SEQ ID NO:4572

SEQUENCE LENGTH:279

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05424

SEQUENCE DESCRIPTION:

GATCGCCCGC ATGAGGTGCT GCTGTGCTCG GACCTGGTCA AGGCATACCA GCGCTGCGTG 60  
 AGCGCCGCCC ACAAGGGNTG AGGAGCAGAC ATCATTCCCT GCCCTGGCAG TGACTTGGAG 120

CCCTGAAGAA GGGCCAATCA TGGGACCACA GCCACTGTGC CCTGCCGTTT CCTGCTGGGC 180  
 CCCTGCATAT GCCCCTGAGC CTGGGGCTGC CACGTGTTTA GGAAACAAAG TATGCGCTAC 240  
 TGTCTGAAAA CAAATAAAGC AGATGCCTTT GTTTTCAAA 279

SEQ ID NO:4573

SEQUENCE LENGTH:131

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05425

SEQUENCE DESCRIPTION:

GATCTAGGCC AGTGGCTGCT TGTCTTGTG GAGCTGTGTG TNTNCTNCTN TAAGCAGCTC 60  
 CTCCCCGGAG TCCCCCAGCA CAGTCCCAGG AGATGACAGG AAGGAAGCAC CAGGGCAAGN 120  
 CGGACGNTCA N 131

SEQ ID NO:4574

SEQUENCE LENGTH:413

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05427

SEQUENCE DESCRIPTION:

GATCTCACCT TCCACCTCCT CCGGGAAGTC TTGGAATGG CCAGGGCCGA GCAGTTAGCA 60  
 CAGCAAGCTC ACAGCAACAG GAAACTCATG GAGATTATTG GGAAATAAAA CGGTGCGTTT 120  
 GGCCAAAAAG ANTCTGCATT TAGCACAAAA AAAATTTAAA AAAATACAGT ATTCTGTACC 180  
 ATAGCGCTGC TCTTATGCCA TTNGTTTATT TNTATATAGC TTGAAACATN GAGGGAGAGA 240  
 GGGAGAGAGC CTATACCCCT TACTTAGCAT NCACAAAGTG TATTACGNT GCAGCAGCAN 300  
 CACANTGTTA TTCGTTTTGG NCTTCGGTTT NGTTNCCGGG GNCAGGTGTT TTTATTAGTG 360  
 GNGTTTTTAA AAGGNGGNTN GTNNGGACCC TGTGAGNA NAANCGGTTT TGN 413

SEQ ID NO:4575

SEQUENCE LENGTH:55

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05428

SEQUENCE DESCRIPTION:

GATCACGCCA CTGCACTCCA GCACCTGGG CGACAGAGTG AGACCTGTC TCAA 55

SEQ ID NO:4576

SEQUENCE LENGTH:102

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05429

SEQUENCE DESCRIPTION:

GATCTGGCGT TGCCAGGCAT TCTGTAAGGG AGGGCTTTTC CAGTTCCTGG AAATGGAAC 60  
 GGAAATNTG GCTGGAAACA TTAATATGGC TGGAAATGGA AA 102

EP 0 679 716 A1

SEQ ID NO:4577

SEQUENCE LENGTH:420

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05430

SEQUENCE DESCRIPTION:

GATCCAAGCT GCTTGAGGGG GTCAACCTTG GACCAAAGTT GCCTTAAGCC TGTGGTAAAA 60  
 GGGCTTCAGG GAAGGTAAGT GGGCCANCTG CTGGAAGCTG CCAGCTGCCC GGNTGGCAAT 120  
 GGTGTGAGTG TCTTGGCCCT GTCCCTGCCC TGGGGTCCAG CAGGTNATCC CTCCTTCTT 180  
 CTCTCTCCTT TGGCGTTTGT TCCTGTAGTC ACTGGGCTAA TCTCCCCCTA GCTTGAAGCT 240  
 GTACATAGGG CCTCCNAGTG CAAATGNTNC TGNCCATACC GTGCACCCTT AGAAGCCTGC 300  
 GTGTGCATAG AGCGCCCNNT ACTTNCCAGT TAANTTCCNA GTTCTTGTTN CNTGAGCTTG 360  
 GTATTTTGTG ATGTGNCAAA TTCTGACTTT TGAAGGTTGG GNAAGTGAAG GGAATTNAN 420

SEQ ID NO:4578

SEQUENCE LENGTH:307

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05431

SEQUENCE DESCRIPTION:

GATCTGGGAC GTCCACGAGT GAGGGGCTGG CCACCCAGCC CGACAGCCTT GCCTGACCAC 60  
 CCTCCAGCAG ATAGACGCCG GCACCCCTTC CTCTTCCTAG GGTGGAAGNG GCCCTGGGCC 120  
 GAGCCTGTAG ACCTATCGGN TCTCATCCCT TGGGNTAAGC CCCAGTCCAG GTCCAGGAGG 180  
 NTCCCTCCCT GCCCAGCGAG TCTTNCAGAA GGNGTTTAAA AGGGTTGCAG GTNCCNACCA 240  
 CTGACCCTTC CCGGNTGGCC TNCTTGCNCA GCTTANAANC TAAAGTCCA GNACGCAGTA 300  
 ACCTNTN 307

SEQ ID NO:4579

SEQUENCE LENGTH:239

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05432

SEQUENCE DESCRIPTION:

GATCCCTCTC CAAAGTGGTT GTCTTTCTNT ACCTTGTGTC TTCTTTGTA AAAATGAAAC 60  
 TCAAAAATAA AATAAATGTG TCAAAATTTG AAAAAAANG AAAACTGAAA AAGCTAACAT 120  
 GANTTGTGTG AAATTGCATA ATGCTGTANT GCTAATCTAC AATATGTAAT GCTATCTTGT 180  
 ATGTNGNATT TGTTAATGCA CCACACAAGT GCAANGTAAA GACTGATTCA CNTTGNNNN 239

SEQ ID NO:4580

SEQUENCE LENGTH:51

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05433

SEQUENCE DESCRIPTION:

GATCTGACTG TACTAAATAT GAAAAATAAA GCAGCACATA CTTTCTCTAA A 51

SEQ ID NO:4581

SEQUENCE LENGTH:201

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05434

SEQUENCE DESCRIPTION:

GATCCATATA ACTGTTGGGT GCATCAGTGC TTTNAAAGG GGCTGCTTAC TATAGGGTTA 60  
 ACTATGTATA TNCATTGTTA AGAGTTAACT TGTGGTTTGG CTGTTTCCTG GATTTNATAA 120  
 CATACATGTG CAGAAATGTA TTCAAATGAA AGGNAGCATA CCTTTATCAN GATGCTATTA 180  
 AANTTGANCA TCGNGTNTAA A 201

SEQ ID NO:4582

SEQUENCE LENGTH:170

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05435

SEQUENCE DESCRIPTION:

GATCATACAG TGAGGCTACA GTGACTGAGG GGAGAATCCC CTCCTGTTCA CTCTCCCAAC 60  
 CCTGCTCCAG CCCCTCAGCT TCCCAGACCC TCATGCANTT GGTGTGAAAT NCTCCCAGGA 120  
 GCTGTTTTAC TGTCTACTTT TCAGGATTAA AAAAAANNNN AAAACTTAAA 170

SEQ ID NO:4583

SEQUENCE LENGTH:393

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05436

SEQUENCE DESCRIPTION:

GATCGGACTC TGCCCCTGGA CCTGGGAACG ACTGGACTGT CACGGGGTTA CCTCCTAGCT 60  
 CTCCCAGTGA ACTCCTGCCA GGCACACACA GCCCCTATAG CACTGAGCTC ACATGGGACT 120  
 GGGATATGGG GGCATCTCTT CCCCAGAGAG GCACTCAGTG AGCCTCCTGT GCCTGGNCCC 180  
 AGCCTGGGCC ATCTCTTAGG TGAGACAGTT GCCCGAACT AAGCCAGGCC TGGCTGGAGG 240  
 AGCAGCAGCT TGGGGAGAGG GATTTCCTG CAGACCTCAA GCCATCATGC GGTGGGTGCT 300  
 GCCATGACAG AGGCTGGACC NCTGGGCCAG CGGGGTTGCT CAACCACCTT TTGTGCAAGG 360  
 TGGCCTTTGT GCTTGCGCCT GCAGGCAGAN GTN 393

SEQ ID NO:4584

SEQUENCE LENGTH:162

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05437

SEQUENCE DESCRIPTION:

GATCCTGCCC GAGGAGGAGG ACGAGGGTGC CGACTCCTAA CCCC GCCAGG CAGCCTCGTT 60  
 CTGCACAGGC ACTTTAGCCC GAGCCAGGNA CACCTGCGAG GGGGCAGGTG TGCTCCGCCG 120  
 CCCTGCTGAT AAGCTGGCTT CATTAACTG ACACCTCTCA AA 162

EP 0 679 716 A1

SEQ ID NO:4585

SEQUENCE LENGTH:122

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05438

SEQUENCE DESCRIPTION:

GATCTGTAGG GTCAGGAACA CAGCACCTAA CACAGTGCCT TATGGATAGT AGTTTATAA 60  
TACAGATGTG TTGGAAGAAT AAATGAATGG GTCCTTTTCA AACAAATTCA CCAGAAGTTA 120  
AA 122

SEQ ID NO:4586

SEQUENCE LENGTH:288

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05439

SEQUENCE DESCRIPTION:

GATCTGTCAC CTTCAGCGAG ACCTATTTCC TCCCCACCCC CAGAAACCTC TTGTGTTCTT 60  
GCCTAGGCC CAGGTGTTCTT GGCAGCCAAA TCGAGTCTCT CATTTTCTCT TGTGGACCAG 120  
TTAGTTTTCG CCATAACGCA GTATTCTGAG TTGCAACTG TCTCTCTGAT GTGTGCCTTT 180  
TGTTCAACAC AGTAACCCCT GCATTCTGCT CTGCTCTAAT ACACTACCTG GAGAAAGTCT 240  
TTTCCTTATT TTCAATAAAT GTCAGACATT ATTGNAAGA AAAAAANTN 288

SEQ ID NO:4587

SEQUENCE LENGTH:188

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05440

SEQUENCE DESCRIPTION:

GATCCCTATG TGGCTAACAG AATTAATGNT TCCAAAAATG TTGNAATTA TATAGTNCTC 60  
TTAATTCCCC ACCTCTAACT ATATTTTGG GTTATTCTT TAGGAACAGA TGCCAGGAG 120  
TCATATTACT GAGAATCTAG AAATCTTTTG CAAAGTCTT GTTATNTTGN CAAATTGCTT 180  
CCCNNTNN 188

SEQ ID NO:4588

SEQUENCE LENGTH:287

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05441

SEQUENCE DESCRIPTION:

GATCTGCCCC CCTCGGCCTC CCAAAGTGCT GGGATTACAG GCGTGAGCAC CAGTGCCCAG 60  
TCCTGCCACA TCTTTTGTG TAGTTGCAGT AGCAATACAA CCTATCTAG AAAAGCTGGC 120  
CAAAAAAGAA AATACCATGA TAATAGGTA CCTAATTAT TGCTTTATTT AAGAAAAATG 180  
TAATATTCA TTCGAATAAG TACTTTTGGG CTGGGATGNT ATTCATTTA GCTACTTGGC 240  
ATGCCACCCA TCTTAGGGAA TTATATGAGG GTTATACTT TAAAGTN 287

SEQ ID NO:4589

SEQUENCE LENGTH:289

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05442

SEQUENCE DESCRIPTION:

GATCAAAATT TCAAGTTGAC AAATTGGAT TTGAAAATC ATTCACTTT TCAATTTTT 60  
 TAATGAGGCA TAACATGCAT ATGGTTAAGT GCACAAATCT TAAGTGACA GTCAGTGAAT 120  
 TTTTGCATGT ATGTATGTAC CTGANGCAAG ATATAGAACT TATTTACTTG TAAATAACAG 180  
 CTATATTGAT ATGTCACATA CCAAANANTT TACCCTTTAA NTTATACAAT TCAGTGGTTT 240  
 TTNGTATATT TGCAAAATTG TGCAACCNTC CCNACCATCT AATTCTAGN 289

SEQ ID NO:4590

SEQUENCE LENGTH:293

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05443

SEQUENCE DESCRIPTION:

GATCCTCAAA GAAAGATTG TTAGAGATAG ACAGGTTTAC AATTGTGGA AACCGAATTG 60  
 ACTGAATCTG TGGCTTCATG CGCTGAAGAA GCTGGGTCCT GGGGCAACAA GTGCTGTGTT 120  
 GCCAGGACAA ATAGATGCTA AACATGGCAC TTAATATTT ATTAAAAAC TTAAATTATT 180  
 ATTGGCAAGC AAATCTTAGT ATCTTTCTTC CAGTAATATG GCCTGGCTGA GGGTCAGACC 240  
 ACAGGACAGG NGCGACCTCC GGCCTTGACT GTCTGGGAAG CTGATGGAT TTN 293

SEQ ID NO:4591

SEQUENCE LENGTH:62

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05444

SEQUENCE DESCRIPTION:

GATCCACTTA GAGCAATAAC CACTTTTAA ATGTAAAATA AAAAGACAAA TGNAAGGCA 60  
 AA 62

SEQ ID NO:4592

SEQUENCE LENGTH:64

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05445

SEQUENCE DESCRIPTION:

GATCTTCCCA CTGCACTCCA GCCTGGCCAA TAAGACCTGT CTCCAGCAAG ACCCGNGTCT 60  
 CAAA 64

SEQ ID NO:4593

SEQUENCE LENGTH:323



SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05446

SEQUENCE DESCRIPTION:

GATCTAGATT CATTAGGAAT GTNTTCTTGT CAGCCAGGCC AGGACCCGGG CTTGCCAAGA 60  
GCAGAGGCC TCCAGCAAC CAGGATACCA CCACTTTGGG GGCTTTGTGT ACAGAGGTCC 120  
GGGTCTGAGA CCTCATAGGC TGCAGAAATC TGGGGCAGCC ACCATCAAGA AGCCCTCTC 180  
AGGGGCCAGA ACTCCTTTGC CAGCGTGGAT TTCTCAAGTC GGGACTGCAT AATTAAAGCA 240  
GTTGCAGTTT TATTTTTTTT ACAGCTTTT TCCAAAAAT GATTTGTAGT TGTGTGTGCA 300  
GCACTTTCGG CCTGATATGT GTN 323

SEQ ID NO:4594

SEQUENCE LENGTH:70

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05447

SEQUENCE DESCRIPTION:

GATCAAAAAG ATAAGTTTAC AAAGTTGAGA CCTCTCATAA AACAAATGAA TAAAAATTC 60  
CTCTTGTA 70

SEQ ID NO:4595

SEQUENCE LENGTH:183

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05448

SEQUENCE DESCRIPTION:

GATCACCTGT GCCTCCCTC CCCCTTTGTT TGCCCTGTG TGGTTGGTCA AGGAGGGATG 60  
TGAGGGNAAT AGGGACCCCG CACTTGCCC TCCTGCCTCA GTCTTTCCCC CACCCTGTCT 120  
CTTCCTGTC CTCTCTGGA AAATGCCAAA ATACACGATG TGAATAAAG TACAACGGCT 180  
AAA 183

SEQ ID NO:4596

SEQUENCE LENGTH:70

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05451

SEQUENCE DESCRIPTION:

GATCTATAAT TATGCCAATA CCACACTGTC TTGATTACTG TAACTTTAGA ATAAATCTTG 60  
AAAGTAGAAA 70

SEQ ID NO:4597

SEQUENCE LENGTH:202

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05452

## SEQUENCE DESCRIPTION:

GATCTGCCTG TCAGAGTCCA CGTGTCTGG TCACTGGTCT TTATAATTGT TGTGCAATAA 60  
 CTAAAGGCTA AGGACTAGAT GCACTATCGT GTAAAGAGAT TACACATGAC TGTACCATGT 120  
 TGCACCTAAT CAAATAGTAT GTGGGGNTTT AAAATCGCTT GCATTGTTTC AAAAAATAAA 180  
 TATCTCAATG TCAAATACTA AA 202

SEQ ID NO:4598

SEQUENCE LENGTH:149

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05453

## SEQUENCE DESCRIPTION:

GATCCTGGNG CCTGGACCGG GCTGGANGAC AGCTGAGNAT GGGCCTAGCA GATGAAGCTT 60  
 GCCAGCAAGG CCAAAGCAAA CGGTTTCTNC TGTGGATAGT GGACAGAGAC CTTGTAAACC 120  
 AATGGAATTA TTCATTTTNC TCTATCNNN 149

SEQ ID NO:4599

SEQUENCE LENGTH:311

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05454

## SEQUENCE DESCRIPTION:

GATCAAGCAA TGGAAAAATT TGCACCACCG TGTCCCATGA AATTGTTTCA ATGTTTAGTT 60  
 TAGATATTGC TAACTTGTGC TATTAACCTT TTGACAAGCG TGTAGTATTG TTTGTTTTGG 120  
 GTTTCTTTTT GATTTATAAC TATTTAGTAG TCCCAGCTA GCTACCAGTA CAGATTTTAC 180  
 CCCATGGGTA GGATTCTATT GTTAAGCCAC ATAACAAAGC ACACCTAATC TGACANCACT 240  
 GCAAATGGAA AATACGAACC AAAAAAAGT TACACCGATA AGTTCANCA ACTGTCCATT 300  
 TTTGGATATT N 311

SEQ ID NO:4600

SEQUENCE LENGTH:221

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05455

## SEQUENCE DESCRIPTION:

GATCCTGCCT TTTCTTTTT CCCACAACCT CACGCCAGNA GTTCGTTTAC ATCAGGTAAA 60  
 TCTTGAGAAA GCCTTGGTGC CCTCCTCCCC ACCCCCCACT CAGTAACCAC GTGCGTGAC 120  
 CCCCAGNATCC TTTCTCAGTA GTTAAGACGT TCTAGGCAAT ACCATAGACA CATCTGACTG 180  
 TGTCTCTNTC TTTGAGTGCA AGAACTCAA GTNATCTTAA A 221

SEQ ID NO:4601

SEQUENCE LENGTH:176

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05456

# EP 0 679 716 A1

## SEQUENCE DESCRIPTION:

GATCAGAGCA GCTACACTGA AGCAAAAACC CCAGCGCCCA ACGCTAAATA TATTGCAATG 60  
 GAGAAACCGT CCACAATGGG GTGTCTCTGT CCTTAGCAGA GCCTTGGGGC TGCCGTTTAA 120  
 GACCCTCTG CTACTCCAC CCTTTAGCA TCTAGTAAAC CACGCGCTGT AACAAA 176

SEQ ID NO:4602

SEQUENCE LENGTH:293

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05458

## SEQUENCE DESCRIPTION:

GATCTCTATC ACTTTGCCAC CTGTTTGATG TGCAGTGGAA ACTGGTTAAG CCAGTTGTTT 60  
 ATACTTCGTT TACAAATATA AAGATAGCTG TTTAGGATAT TTTGTTACAT ATTNGTAAAT 120  
 TTTNGAAATG CTAGTAATGT GTTTTCACCA GCAAGTATTT GTTGCAAACT TAATGTCATT 180  
 TTCCTTAAGA TGGTTACAGC TATGTAACCT GGTATTATTN CTGGGNCGGG CTNTTTTAAA 240  
 ATACNAGNCC NGGCCAANAN AAANTAGGAN CAAAAACCTN GGGGGTTCTG AAA 293

SEQ ID NO:4603

SEQUENCE LENGTH:184

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05459

## SEQUENCE DESCRIPTION:

GATCAGGGAT GGGGATGAGG TGAGGGGATT TGCTAGAAAG GGGTGCAAAG GAATTTAGCG 60  
 GGTGATGGAG CTGTTCTGTG TCTTGATTGT GGAGTTATTA CAAGACGGT ATTACAGTTT 120  
 TGTTGTATTG AATTTTACTG TATGAAAATC ATACCGCAAT AAACCTCACT CACATACGCA 180  
 CAAA 184

SEQ ID NO:4604

SEQUENCE LENGTH:372

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05460

## SEQUENCE DESCRIPTION:

GATCAAGGAA TCTTTCATGA AGGAAATTTA AATACAGAAT GAAACATTAA NGGTAAAAGT 60  
 GGAGTAATTA TTTAAATTAT GTGTATAAAA GGAATCAAAT TTTGAGTAAA CATGATGTAT 120  
 TACATCATCT TCGGAAATAG ATATGATGGA TTCTAGTGAA GACCAAANTT ACTTCTGTTT 180  
 ACTTTCTATC AGGAAGCATC TCCATTGTAA ATATGTATTT NCATGTTTAT TACAAAGACC 240  
 CAAATGANAA NTTTTNNGTC CATTTTNGC ATAGCCTAAT GGTAGACTNG GAATAANAGT 300  
 TCTGTATTN TGGGATTTC NGNGTATAAN NCTGGTTTCT AGNTGGGGCG TTAAGTCCCN 360  
 TTTGGGTAAA NN 372

SEQ ID NO:4605

SEQUENCE LENGTH:279

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05461

SEQUENCE DESCRIPTION:

5 GATCATGTAG GACGCGGCAT CCTGCCCTG GTAGAGAGGA CGAATGTNCC ACACCATGGT 60  
 GTCTACGAAA AANAAATAGT TAGTCACCTT CTNACCTTCT CCTCTTTCTC AAAGCCTTCT 120  
 GTCCCTGGTT TTTGCAAGTN CTGCATTTC GCGGAGAATC CGCGTTGCCT ACTGCTGCCA 180  
 CCTCCTGTNC ATTTAGAACT ATGCAAAGAC TCCGNTTCCG TTTTCCTGAG CTCCTNGGGC 240  
 10 CCCAGAGTCT CTGTTTGATT ATTTATTAT TTATTNAGN 279

SEQ ID NO:4606

SEQUENCE LENGTH:324

SEQUENCE TYPE:nucleic acid

15 TOPOLOGY:linear

CLONE:HUMGS05462

SEQUENCE DESCRIPTION:

20 GATCGAATTT CACATTGTAG AGATGTATAG CTGTGATTAA GTCGCATATG TATGCTGGGA 60  
 AACGGCTTGA GTGGATGGCT AATATAAAG TTGTTGGCCA TAATGCCACA CCTCTCATCT 120  
 GCTTGAAATA TGGACCAAGTA TTCTAAAGTA TCAGCTACTG GGTCTCATT CACTACAAGA 180  
 TAANTTCAAA CTTCACAGNA CTTTGCAGCA GTTCACCACC AGGCGGGACT GTGTCTGCAA 240  
 ACTCNCCTGT CTTCACAGAC GNCTGATTAA NGCNANNCT CTGGNNTCTC AAAGATNTAT 300  
 25 TGGGGAGTGN NGGTTTTNTG GGNN 324

SEQ ID NO:4607

SEQUENCE LENGTH:225

SEQUENCE TYPE:nucleic acid

30 TOPOLOGY:linear

CLONE:HUMGS05464

SEQUENCE DESCRIPTION:

35 GATCACAGAC CTAAGGCCCA GGCCACCTNT CCANACCTGG AATCTATGCA NAANTAATTT 60  
 CCCCTTAACC TGGGAGGCAG CGACACGTGT NACTTCTGTA AGAAACGTGT GTACGTAATG 120  
 GAACGGCTGA GCGCCGAGGG CCACTTNTTC CACCGGNAGT NTTCCGATG CAGCATCTGT 180  
 GCCACCACCT TGCGCCTGGC CGTCTACACC TTTNANTGCN ATGAN 225

SEQ ID NO:4608

SEQUENCE LENGTH:251

SEQUENCE TYPE:nucleic acid

40 TOPOLOGY:linear

CLONE:HUMGS05465

SEQUENCE DESCRIPTION:

45 GATCTAAATN CAGACTNNGG AGTTGGGAGG AGGNACCAAA GTGAACCATC CTTCAATTTAT 60  
 TCAGTCATTC GTTCATCTGT CAAACACGTA TTTGGACATC AAGGTTGCAG AGATGAACAA 120  
 TGCATGGNTT TCATCTTTNA GGAGTTCAAA ACCTAGTGGA GAGANCACAT GGTACAATCG 180  
 TAACACATGA AGGTCAAGTA AGTNCTGCAG TAAAGGTACT AATAACATGT TCCTTGGNNC 240  
 50 AGNAGGATGN N 251

55

SEQ ID NO:4609  
 SEQUENCE LENGTH:239  
 SEQUENCE TYPE:nucleic acid

5 TOPOLOGY:linear  
 CLONE:HUMGS05466  
 SEQUENCE DESCRIPTION:  
 GATCCAAGTG TTGCCTGTCA GCAGAGATAG GAGTGAAGTT GATGATGATG GTTAGATGGC 60  
 CTCACAAGGG ACTCTAGTGA TAGTAAAGGT TCCAGTGGCA AACACACAAG TGAAAAGTTT 120  
 10 GAATATAGTT TCATAATGTT TGAGAGTGTA AAAAATGCAT TTTTAAATTA ATACATTACT 180  
 TTCTGTACTA TTTTAAATAA GTGTGTATCT AAATAAACAC ATAANATGTT ATGAGTAAA 239

SEQ ID NO:4610  
 SEQUENCE LENGTH:344  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05467

20 SEQUENCE DESCRIPTION:  
 GATCATCCTG GCTGGGAGAA GTGGGACCGA GCCACCCAGC TNCATATCC CCAAGCNGCG 60  
 CTACAGCCGG GATGGGAGGC ACGTGGCCTC TCTTTTATCC GTCTATTAT NTGTAAAGTG 120  
 TATTCGTGTG GAGGAGGTTG TTGCTTTATT TTTTAAAGGC TCTGGAGTNT TGTGTATGGT 180  
 TTCTTTTAC ATCNGGGCNT CCCATGGGCA CTTCTAAGAA GAGAGGGGAT TTCTTTGAAA 240  
 25 AGGAGAGAGG AATCCCTAG AGCAGGGGAA GCANTGCCTG CCAGCTNTTG TGCACCTTNC 300  
 GGGNGAANTT AAATATNCNN NAAATTTTCA AACCAGNGAA AANN 344

SEQ ID NO:4611  
 SEQUENCE LENGTH:128  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05468

35 SEQUENCE DESCRIPTION:  
 GATCTCTCTC TCTCTCTCCC TTTCCTCTCT CTCTGTTGGA TGCTTCTGTA TCTTTTCCA 60  
 CAGCATAATG TCTGGTGTGA TGGGGAGCTA TTTATTGAAA TNAAGATTA TNTATTGTG 120  
 CCATGAAA 128

40 SEQ ID NO:4612  
 SEQUENCE LENGTH:92  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear

45 CLONE:HUMGS05469  
 SEQUENCE DESCRIPTION:  
 GATCCATTTC TGGGATAGAA TTGTATTTT TAAGTCATTT TTTTCTTG AAATGGATAT 60  
 GTACAAATAA AATAAATGGA AGACAGGATA AA 92

50 SEQ ID NO:4613  
 SEQUENCE LENGTH:130

55

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05470

SEQUENCE DESCRIPTION:

GATCCAACAC ATTCANGTCA GTAGAANCAA ACCAAAACAT GCAAGCTTCA GCCTGNTCGA 60  
GTTCTATAGT TGTACCTAA ATCGTATGTT GTATGATACA TANGGTTATG TATTAGCNCG 120  
TAGCCGNGGN 130

SEQ ID NO:4614

SEQUENCE LENGTH:279

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05471

SEQUENCE DESCRIPTION:

GATCACAGCT NCCCTTGAAT CTCATTGCCT CAGAGAAGAC TAGAGGGCTC TTGGACTATC 60  
CCTAGGGCTA CACAAGAATA GTTCAGCCTT CTGCCATGCC ACACAGCCTC AGCTTGAATC 120  
TGGTTCATTG CGTCCTCGTG TTCTTCTCTC ATCCTTGCCT TANACCAGGG ATTCTGATAC 180  
CGAAGAAGAG GGGCCAATGA AAACCATGGA GTCTGTTCTG GACTCCCAGG GCTGGGACAT 240  
TATGTAGGAG CCACTTCATA AACATTCTCT TTACTCAA 279

SEQ ID NO:4615

SEQUENCE LENGTH:333

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05472

SEQUENCE DESCRIPTION:

GATCAGTCAT GTGTCCGTAA CCTCGTTCCA TGACATCAGG ATAGCTGTGT TTGCACACCA 60  
TGCTCCATGT NCATTCCGGAG CCAGGAGGGG TTCTNAGTGG AGCCTGGCTT AGGGAACAGG 120  
GAGCGATGGA AGAATGCCAA CATTAGCGTT GGTCTTCTCT TGTNAGGAAT NAAGGATGCT 180  
TGCACACATG CACCCCTCA CTCTCACACT TGCACACATA CACACACACA CACACGAANA 240  
TGGTTGGTTT GTCAAAANCTC ACTGTAGTAC ATAAAGNTTG CACTCTGNGT NNNNATATCT 300  
AGCNGNATGG GGGGTACGNT TTGGGCNGGT GTN 333

SEQ ID NO:4616

SEQUENCE LENGTH:335

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05474

SEQUENCE DESCRIPTION:

GATCTCTTCC CACCTACCCT ACCTACTCCT ACCCAANACC CCCCTTCCCC ATTAATGTGA 60  
GTAATGAATT AGCCTGACCA CAGGTGGTCA CTGTAGGCTA ATGGAAAATA CCCAAGGGNG 120  
GGCAAAAGCCC CCCATCAGAT GCATGAAGGT TTGCNAATGT TGAAGCCAC TGCCCCACAC 180  
ACTGTGTCTT TATAGANTTN CCCTTTCCCN CACCCTCTTC CTGTNTCCAA CCTGGGACAC 240  
ANCTTNGCTC AAAGNGCTGG TGGNTTGTGG GGCATTAATC TACAACCANA GTCCTGAATG 300  
GAGGCAAAGA GGGCCCCACN GGNTTTGNGG GGNTN 335

SEQ ID NO:4617

SEQUENCE LENGTH:131

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05475

SEQUENCE DESCRIPTION:

GATCCATTCA CATTGCAAAC TTATCCTACT GTATAGCCAT CCATTGTAAG AATACATTTT 60  
TCNATTTATA TTGTGTACAT TACTCCAGTG AACATTCTNN ANCTCCTCTT TTNGTATCCT 120  
GTGCAAGANT N 131

SEQ ID NO:4618

SEQUENCE LENGTH:323

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05476

SEQUENCE DESCRIPTION:

GATCTCAGCT ACGTGGGAGG CTGAGGCAGG AGAATCTCTT GAACCTAGGA GGCAGAGGTT 60  
GCAGTGAGCC AAGATTGTNC CAGCCTGGGC GACAGGGTGA GGCTCTTGTC TCAAAAAAAA 120  
AAGTCCACAT CTTATGANC CCTCAGACTC TGGAGTTGGG TGTCGGCTTT TTAGCCAGN 180  
TTTTGTGGGA ATTGCCTTN NCCTATTTAA GANGGAANGT GGGTAATGGA GTCCCAGCCA 240  
CTCANGAGNC TGGNTATCCC CCGAGANTGG CTTGGGTTAC CAGCTATGGA CCCTTGGAAG 300  
ATGANTCTAN ATCCTTCTCA CNN 323

SEQ ID NO:4619

SEQUENCE LENGTH:346

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05477

SEQUENCE DESCRIPTION:

GATCACCTCT CTGTATCCCC CACCCACTAT CCCATTTNCC CTCCTCCTCA GCTAGGGCCA 60  
CGCGGCCCA CATTGCACTT CTGGGGGGTG ACCGACTTCG TACACGGGTT TAAAGTTTAT 120  
TTTATGTTT TAGTCATTGC AGAGTTCTTA TTTTGGGGGG AGGGAAGGG GGCTAGTCCC 180  
CTTCTTTTGG CCCTCCGCCC CCGCAGGCTT CTGTGTGCTG CTAAGTGTAT TTATTGTNAT 240  
GCCTTGGTCA GGGCCCTCT ACCCACTTCT CCCAGTAAGT TGTGGCCCCA AGCCNTATC 300  
CNTGTGCTGT GTGGAGTGGN CAACCTGACC CCCGNAAGNG GGNNAN 346

SEQ ID NO:4620

SEQUENCE LENGTH:343

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05478

SEQUENCE DESCRIPTION:

GATCTTTTAA AGGATAGACG TGGTCTCATG CTTCTTTTGT NCGACTCCGT TTAAAGGAG 60  
CATTGTAACC ACTATCCTCA TCCCTACAAA AATCCAGTGG ATGCACTTCC AAATTACTTC 120

5 TGTCATTTTG TATGTGTTGT GTTTAGGGNT GCGTAATTTT CACTGGATGN TGAGATACAT 180  
GGTGATACTA TGTCAGTTTA TTCTCTGTGA ATATGTCTGT ACATAGNCAG GAAGCTCTAC 240  
TTATTTGTNC ATAGGCTGTC TGANGTATGT ACTTCTGTCA CATGGNCTTC ATTCTGATAA 300  
AGGGTGTTTC TCCCTTGNTT CACTGTCCAT ACCTTTGTGN NGN 343

SEQ ID NO:4621

SEQUENCE LENGTH:50

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05479

SEQUENCE DESCRIPTION:

GATCCTTCTG TGCTTGCTTG CATCTTTAAT AAAGACATGT TCCCGGCAAA 50

SEQ ID NO:4622

SEQUENCE LENGTH:170

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05480

SEQUENCE DESCRIPTION:

GATCCAGCTA GGCTGGGACA CTCCTAAAT CAGCTGCGTG TTGTTAGCAT CAGGCAGAAT 60

GAATGGCAGA GAGTGATTCT GTCTTCATAG AGGGTGGGGT ACTTCTCCAT AAGGCATCTC 120

AGTCAAATCC CCATCACTGT CATAAATNCA GNGGNAATNG NCTGNACAAA 170

SEQ ID NO:4623

SEQUENCE LENGTH:290

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05481

SEQUENCE DESCRIPTION:

GATCCTCTCT GTGTAAATCC TGCCCGGTGC TGTNAAGGCT GGACGGTGGA GGACCTGCTG 60

GGGTCTCCTG GNACCCGCCT GTTGCTTCTN CCTCCCCTG TGGAAAGGTC TATATNACGG 120

GCTGCCTGAG GCCCCAGAAC TCGTCTGTAA ACCACCTTTT CCAGCCAGAG TTCCCAAAGC 180

TGGAACGCTA GCTGCCTGCT CTTCCTTAAG NTGGCCTCCC CCNGACCCGT CANGGTCCTC 240

AGTTGCCAGG GCTGGGGCCA NCCACTGTNA CACTGNGGNN TGCANGANAN 290

SEQ ID NO:4624

SEQUENCE LENGTH:125

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05482

SEQUENCE DESCRIPTION:

GATCCAGCTT CAGCTGCACA CCTCTGTCCC CTTGGATGGG GAACTAAGGG AAAACGTCTG 60

TTGTATCACT GAAGTTTTTT GTTTTGT TATACCGTGT CTGANTAAAA ATNCCCACNG 120

TTAAA 125



EP 0 679 716 A1

SEQ ID NO:4625  
SEQUENCE LENGTH:252  
SEQUENCE TYPE:nucleic acid  
5 TOPOLOGY:linear  
CLONE:HUMGS05483

SEQUENCE DESCRIPTION:

GATCCTGACC CCAGCCAACA GCTGAGCTGC CGGGCCTCCT CGAGGCCCTA AGCCAGCCCC 60  
10 AGAGGTCCCA TCTNAAGCTG GAGTACCCTG GGGTCAGCAG CAAGAGAAAAG AAGNGGAGAT 120  
TTTNTGTTTN TTTTCCCT CAGCCCTGCC ACCGTGGGA GTCTGGTTT TNTCTCATC 180  
CTGTCTCTCT CCTCCTTACT CTTGGATAAA TAAACAGCCT GTGAGCACAC AGGCAAGCCC 240  
GGCCCAGTGA AA 252

15 SEQ ID NO:4626  
SEQUENCE LENGTH:334  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
20 CLONE:HUMGS05484

SEQUENCE DESCRIPTION:

GATCGTNACA AATCTNCCCT CCTCACCAGC TAGTCTGGGG TTTCTCTCC CTGCCCCAGG 60  
CCAGAACTGC CTTCTTCATT TCCACCACG CTCCCAGCCT CTTAGCTGAA AGCACAAATG 120  
25 GTGAAATCAG TAGTCTCGNT CCATCTNNA TAGACTAAAC CTAATGCCT CTAGGACGGA 180  
CTGTTGCTAT CCAAGNGTTT GGTGTTACCT TCTCCTGGGA GGTCTGCTG CAAACTCAAG 240  
TTCCNCAGGA TGGTCAAGNT GTCANGANAT ACAAGTTTNC ATCAATTGTA ATTATTACCT 300  
GGTCTTTNCA ANTTTGCAAN GGNGTTTGG GNTN 334

30 SEQ ID NO:4627  
SEQUENCE LENGTH:192  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
35 CLONE:HUMGS05485

SEQUENCE DESCRIPTION:

GATCTTCCAT CAGGGCCGGA GTAAATCCCT AAGTGNTCA ACTGCCCTCT CCCTGGCAGC 60  
CATCTTGTC CCTCTATTCC TCTAGGGAGC ACTGTGCCCA CTCTTCTGG GTTTTCCANG 120  
GGANTGGGCT TNCAAGGTNG GNGTNTCTGT AAAATCAACA GGTAATAAAA ACTGTGTATG 180  
40 AGNCCNGGCA AA 192

45 SEQ ID NO:4628  
SEQUENCE LENGTH:315  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05486

SEQUENCE DESCRIPTION:

GATCTACAAT NAGATATCAC TTAACACTCA CTGGAATAGA TATATAATCA AAGTGATAAT 60  
50 ATCAAGTGTT GNGAGGATG CAGAGAAATT GGNACCTCA TGCCTGTTG GTGGATACCC 120  
ACGTGATATN AAAACAAATG TCTACACAAA AACTTGTCAGATGTTCT TTGCAGCATT 180

ATTATAATA GCCCAAATT GANACAGCCC TANTTTCTAT CAACTNACAG GTGAATAATC 240  
 ANAACGTGGC ATATCCATNC ATGGNGTATT ATTCAGCATT ANANNATGGG ATGAAGTACT 300  
 GGTATGCACC ACTCN 315

SEQ ID NO:4629

SEQUENCE LENGTH:51

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05488

SEQUENCE DESCRIPTION:

GATCTGAAAT NATGGTTCAA AAAATACATT CATAATAAAA GTCTTAACAA A 51

SEQ ID NO:4630

SEQUENCE LENGTH:337

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05490

SEQUENCE DESCRIPTION:

GATCAATGCC CNTNTNTCAG TCTCATCTGT ACTCACGGCA GCCCTGTGGA GTACGGTGTA 60

CTGGCCCAGC TTACAGATGC AGAAAGCGAG ACGTTCTGCC ATNAGATAAA GTCACGTGGC 120

TCTTTAGTAN CACGGACAAG GCTCCTCGCC AAGGAACTCG TGGCAGAAGA GGGCAGCAGT 180

TGGCAGTAGC TGCCGATGTC TGTCCCCAGC TNCACCATTC CTCCTGTGG CTGTGCCATG 240

CTCGTGGTTT CAGTNTCCGT GTGTNCATGT GNCTNCCCTT NAAGAGCTCG CANCTGGTGT 300

GCTTNGGGGG TCCCAGGGCT GTGTAGNGTN TTCTNCN 337

SEQ ID NO:4631

SEQUENCE LENGTH:90

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05491

SEQUENCE DESCRIPTION:

GATCTGTCTA TTTCGTTTAT CCATAGTTGC CTNACTCCCC GTCGTGTAGA TAACTACGAT 60

ACGGGAGGGC TTACCATTTC TTCCCTGAAA 90

SEQ ID NO:4632

SEQUENCE LENGTH:97

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05492

SEQUENCE DESCRIPTION:

GATCAAAGGC TCITTCCTCT TTTGTTTGAG AGTTGGTTGT TTTAAAGCTT AATGTATGTT 60

TCTATTTNAA AATAAATTTT TCTGGCTGTG GCAGAAA 97

SEQ ID NO:4633

SEQUENCE LENGTH:320

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05493

SEQUENCE DESCRIPTION:

GATCATCGTA TGCAACAGCT GGGTAATAAG ACTGGCATAG CTCAAACATAT CCTGCCAAAC 60  
GCTCTCATCT GATTTTTCCT CCCTTCTCCC CCAACCTCCA ATCACCCTGA GTCACCTGTA 120  
AATTCATTG TCATTCAAAG CGGAATAACA AGTTGTCCCT AGCAAAACCG CTGAGCGCTT 180  
TATAATTTTG TGGTGTATTT TTGTCACTAG GTAGCAGAGG CGGAAGTATT TTTTGGTGTGTA 240  
ATTCTTGAAA TTTTCTGACA GGAAACCGGN TAAAGATAGA TGTGTCTGAG GNTAAAAAAN 300  
GTTNGGNNNG NNNTGNTTTN 320

SEQ ID NO:4634

SEQUENCE LENGTH:146

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05494

SEQUENCE DESCRIPTION:

GATCTATGAA ATAGGTAACA TTTGAGTAGG TGTCATTAA ANATAGTTGG TGAATGTCAC 60  
NTATGCCITC TATGTTGTTT GCTCTGTAGA CATGAAAATA AACAATATCT CTCGATGATA 120  
ATTTGTATTA AGTAATCTAT AAGAAA 146

SEQ ID NO:4635

SEQUENCE LENGTH:177

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05495

SEQUENCE DESCRIPTION:

GATCTATCCA GCTGCTTCCT TGTAGCCAAG AATGTGTTCA ATGAATTGTG ATTCACTGAT 60  
TTTATTGATT TTGTTTTAAA ACAGGGAGAC TGGTATTTTT GAAGCTGCTA TCATTTTCTA 120  
TTTCTNTATT AATNNCTTTG TAATCATCTT ATTAAAGTTT TCTTATTTAG TGGGAAA 177

SEQ ID NO:4636

SEQUENCE LENGTH:103

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05496

SEQUENCE DESCRIPTION:

GATCCTCTCC TTGTATGTAA TACCTTTTTT TCCCCTTTCT AGCAAGTACT TTCAAAGAA 60  
CTCTGTACAT TTAAACATAA AAAATAAATT ATGTTGAGCC AAA 103

SEQ ID NO:4637

SEQUENCE LENGTH:145

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05497

EP 0 679 716 A1

SEQUENCE DESCRIPTION:

GATCCATTTG TAACTACTCT TAATATATGG TACATAGTTT AAAAAATTN ATTGAGCTTA 60  
AAGTGTATCT AGTTTGTGT CCTAATTATC CTGCTTAACC TTCTATTGTA AGGNTTNC 120  
ACGTCAATAA ATATTATAAT GTAAA 145

SEQ ID NO:4638

SEQUENCE LENGTH:279

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05498

SEQUENCE DESCRIPTION:

GATCANCAAA CTCAACACCA TCTTGCAGGA GCAACGGGNT GGCCTTTAAC ATTGCTGAGG 60  
CTTTCAAAGA TGTGTCAGAA CCCATTGTAT TTCTGCAACA GATGCAGGAG TTTAGAGAGA 120  
AAATCAAAGT AATCAAGGAA ACTCCTTTAC CTCCTCTAA TTTGCCTGCA AGCCCTTTAA 180  
TGAAGAACTT TGATACCAGT CAGTGGGAAG ACATAAACT AGTCGGTGTG GATAAACTTT 240  
CTTTCCTCA AGACACTGGC ACATTCATTN GCAAGGNTN 279

SEQ ID NO:4639

SEQUENCE LENGTH:242

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05502

SEQUENCE DESCRIPTION:

GATCAGAGCA AAGAGAAAAG AAAGCATAAG GACACTTACT CAACAGAAGC ACCTTTAGGC 60  
GAAGGAACAG AACAATATGT CAATAGTATC TCAGATTGAC CATTTCTGTT ACTTGTCAAT 120  
TCTACTTTCA GAACTAAAT GACTTTCAA TTTGGGTATA GACAATAAAG AACTGAAGTG 180  
CTCACTACTC AGTGATTGG AAATTTTGAT GCTTGATAA ATGTCAGATA ATTAATTTCN 240  
AN 242

SEQ ID NO:4640

SEQUENCE LENGTH:64

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05503

SEQUENCE DESCRIPTION:

GATCTTGTTA GACACATGAA TGTGTATAAT CATGTAAAT GCAAATAAAA CTAGTTCATA 60  
GAAA 64

SEQ ID NO:4641

SEQUENCE LENGTH:62

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05504

SEQUENCE DESCRIPTION:

GATCATNAAG GTAAGGACTG GAGTNATGCA GCCACAAACC AAGGAATATC AGTAGCCATA 60

AA

62

SEQ ID NO:4642

SEQUENCE LENGTH:339

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05505

SEQUENCE DESCRIPTION:

GATCAGTNCT AACCTGAGC TGGCGGCTAT CTTTGAAAGT ATCCNGAAAG ATTCATCATC 60  
 TACTAACTTG GAATCAATGG AACTAGTTA GATGTTTGT CACCATGGGG ACCATTACAT 120  
 ATGACCATAC AATGCACTGA ATTGACAGGT TAATCATAAG ACATGGAAAG AGAAGTGTCT 180  
 AAAAGCTTCA AAATGTTCCA CTTTTTTTTT CCTTCATGGN GACTGTTTGT TTGGCTTTCT 240  
 TCCATTGTNG TTTTGTAGC ATTTATTTC AAAATGTGTA TTTCCATAAT CCAGAGGTTG 300  
 TAAACCACT AGTGTTTTAG TGGGTTACAG CACATTNN 339

SEQ ID NO:4643

SEQUENCE LENGTH:70

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05506

SEQUENCE DESCRIPTION:

GATCTTCCTC CTTATTTTAA TGCTTCTTTC TCTTTACAAT TAAAAGTTCA TAAAATCTTT 60  
 CAACATTAAA 70

SEQ ID NO:4644

SEQUENCE LENGTH:57

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05507

SEQUENCE DESCRIPTION:

GATCAGCCCT AATNATGCTG TGTCATGAT GCTTTTAATA AAAACAACCC CCACAAA 57

SEQ ID NO:4645

SEQUENCE LENGTH:158

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05508

SEQUENCE DESCRIPTION:

GATCTCTATG CCAATATGC TGCCTCAACT CTGAGCTGTC TGCAAGGCTT AGTAAGTATT 60  
 GAGTGGTGT TTTTTTTT NTTTTATACA ATACCATNTT AACCACATGA GTTAAATAAA 120  
 TTTGAGAAGT TTTTTTAAAA CAGTGCTTCA AACTGAAA 158

SEQ ID NO:4646

SEQUENCE LENGTH:153

SEQUENCE TYPE:nucleic acid

# EP 0 679 716 A1

TOPOLOGY:linear

CLONE:HUMGS05509

SEQUENCE DESCRIPTION:

5 GATCCCCGGG TACNANTNAN CCATGCAGGC ATGTTTTTTT TNATTTTGC ATAGGCAATC 60  
CATTCTGTAC AGGTAGCTAA CTTTGTAAC GCTGTGTATT CCCTCTGCCC CCATGGCTGC 120  
TGGTGTAAT AACTGCATC TCCCGTTGGT AAA 153

SEQ ID NO:4647

10 SEQUENCE LENGTH:342

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05510

15 SEQUENCE DESCRIPTION:

GATCCAGAAG TCATTAAGG AACATAAGG CTGGGGAGGC AGGGGGAGTA AGTTCTATTA 60  
GAAAAATCCTA ANAGCTTAAC AAAACTAGGG TACTAAATTC AGTTATAACA TGTTACAGAC 120  
TTAAATCATA GAGCTGCCCC AACATCTAGA CAGTCTCTCC TACTGATTAT AAATGAGTGA 180  
20 AAATATCAG TTAGAAAAAT CTAATTAAG TTGTTAATAC ATGTTTCTTT GGTGAGCACC 240  
TGGATATANT TATCACAAAT NCTTTTATAC ATATGTCGAA AATGCTTTCA ACAAACCTAA 300  
GTGTCCTAAT TACATGCCAC TTTTNNAGG CTCACCTTAT GN 342

SEQ ID NO:4648

25 SEQUENCE LENGTH:333

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05511

30 SEQUENCE DESCRIPTION:

GATCGCTACG GTTCTAAATA CTGAAGTCAT GATGTGTATT TCCNGGAGAA ATTCCTCTTT 60  
AAATGAACAA GTAACCACAT CTCAGGCGGC AGTGAAGTCC AGATAGTTT GCAGATTGTT 120  
TTGCTACTTN TNCATATGGT ATATGTTTCT GNTTTTAAAT ATTNCTNTTG AGAAATCTG 180  
35 AGTNTGTATG TAGGAGCTTT CCTGTNATNN CTGTTTCACG TTCCTTCCTG TCACACCCTC 240  
CTTGTTGGCGT CTCTGTGTAT ATCCTNGGCT TTATTTTCTN GGANCCTGN GATTTCACCA 300  
CTGNGGGCCT GGAGACCTCG GCTCCTNCTG GTN 333

SEQ ID NO:4649

40 SEQUENCE LENGTH:187

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05513

45 SEQUENCE DESCRIPTION:

GATCATGAGA AATTACAAA ATGTCCACCA ATAGAATGAG TGAATCACCT GTGGTATATT 60  
TATAAATAAA AATATTAANT AGAAGGTAAC ACAAATCAGA CATAACACA TTAGATAGAT 120  
AAATTTAGAG GAAAAAAAAA AAACCATGCA AGNTTCAGCT NCNCGNGTNC TNTGGTGNCA 180  
CCTAANN 187

50

SEQ ID NO:4650

55

SEQUENCE LENGTH:228

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05514

SEQUENCE DESCRIPTION:

GATCGAGGGG GTATGCGTGG GGGAGTTGTG AGTGAGCTCA GCTCCTTTCA GGCCTGGCCT 60  
 CTCCAGAAC AGAGTGAAGC CCCTGCCCTG GACCCCTGCT CCCTTCTACC CTTGAGGGCC 120  
 ACCAATGGAA GAGCCCGCCC TTCATTCTGC AGCTCCTGCG GCCAGGCTGA GCTCTGCCCC 180  
 CAACTTTGTT TTCTCTCATG TTCTCAATAC ACTCTGCCTC AAATCAAA 228

SEQ ID NO:4651

SEQUENCE LENGTH:300

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05515

SEQUENCE DESCRIPTION:

GATCTGTAGT TAAGGGAACC AAGGGGTCAT TGGGGCAAAA GCATTGTTTC TCAAAGCTCC 60  
 TTGATTAAGA GAAAGAACAG AAATTTGCAC AGAAGATAGT GTCAAGGAGT GAGAAAGTTT 120  
 GTTTGAGGGC AGTAGCTCAG TGTGGAAGAA AATCCTGAAG TTTCTGTTGA AGCCATACAA 180  
 TGTTCATGTT GGTACTCTC TAAGACATTC TCTGAGGTGT GTGAGGAAGT CACTACTCCT 240  
 AGCCTTTGTT AAGATGTAAT TTTAAATATT CAGTTATGGT ACTATGTTT CAACCTCTCTN 300

SEQ ID NO:4652

SEQUENCE LENGTH:154

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05516

SEQUENCE DESCRIPTION:

GATCAGTTTA TATTGCTCTT AAATGATAAT CCTCAGCTTC CAAGTTTTTG TGAAGTCACT 60  
 TTGGTTTATG TGTTTGCTAC ACTCACTGAG AAATTAAACA CCTTGCTTGA TTTATTGTAA 120  
 AAAGGAAAAA ACAACAGAGC CATACTTAAG CAAA 154

SEQ ID NO:4653

SEQUENCE LENGTH:250

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05518

SEQUENCE DESCRIPTION:

GATCTTTATG CTGTTATNAC AGGAGAAGTG ACATACTTTA TATATGTTTA TATTAGCAAG 60  
 GTCTGTTTTT ANTACNATAT ACTTTATATT TCTATACATN TATATTNCTA ATAATACAGN 120  
 TATCACTGAT ATATGTAGAC ACTTTTAGAA TTTATTAAAT CCTTGACCTT GNGCATTATA 180  
 GCATTCCATT AGCAAGAGTT GTACCCCCNC CCCAGTCTTC GNCTNCCTCG GGNTTAAGCT 240  
 GTTTTATGNN 250

SEQ ID NO:4654

# EP 0 679 716 A1

SEQUENCE LENGTH:240

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05519

SEQUENCE DESCRIPTION:

GATCCCCACC CCAATTCAAT CCCGGAAGGG ACTTACTTAG GAAACCCCTC TTTACTAGAT 60  
ATCCTGGCCC CCTGGGCTTG TNAACACCTC CTAGCCACAT CACTACAGTA CAGTGAGTGA 120  
CCCCAGCCTC CTGCTTACCC CAAGATGCCC CTCCCCACCC TGACCGTGCT AACTGTGTGT 180  
ACATATATAT TCTACATATA TGTATATTAA AACTGCACTG CCATGTCTGC CCTTTTAA 240

SEQ ID NO:4655

SEQUENCE LENGTH:290

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05520

SEQUENCE DESCRIPTION:

GATCCAAATA GTCAGAAAGA AAGGAAGGAA GTGCTGGTAA GAAGGAAGGG AGGAGCGTAT 60  
CCTAAAGAAC TACTCCCAAC TATACAACTG TTGTTTTCTT CCTAATTTTC CTAGGGATTTC 120  
CTCATAATTA TCTCCTTTCT CTTCAATAAT TCTACTTACT GACCTGAAAT AAAATTCTC 180  
ATTTGGTTGT CCTCAAGGTG CAGAATATGG ACTTAAGGCT CCTCCAGACA ATTCAAATGT 240  
ATTGTAGACA GTTAAGNTAG AGTAAACTC ACCGTTTTGT CCCACTGAAA 290

SEQ ID NO:4656

SEQUENCE LENGTH:355

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05521

SEQUENCE DESCRIPTION:

GATCGACAGG CATCCACAGT TGAGTATCTC CCAGGCATGC TACATTCAA TTGCCCTAAA 60  
GGTCTCCTAC CCAAATTCTC CACGCTGGTC TTNGGTAAA CTAGGCCCTG CTAAGTCTTA 120  
TAACATTCAT ACAGGTTTGG ACCAACAGGG CTTTATTCCA GGANCAAAAT ATCTTATGCC 180  
TTGGGACATT GNCATCAGGA CTAGAGCTGN AGATGAAGGA GACTTAGACA CAAACTCTTG 240  
GCCTGCTCCA AATAAAGCTA TTCCTNGNAA GAGNAGTGCG GTTGTAAATGG NTAAGAGNGN 300  
AGANCGGCGA GATGACATTG NTCGAGCTTN TNNTGGNCTT TGAATATNGA AGTCN 355

SEQ ID NO:4657

SEQUENCE LENGTH:382

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05522

SEQUENCE DESCRIPTION:

GATCCGCAAA CGATTAATTC TGTCAGACAA AGGGCAGCTG GATTGGAAGA AGATGTATTT 60  
CAAACCTGTC CGATGTTACC CAAGGAAAGA GCAGTATGGA GATACCCCTC AGCTCTGCAA 120  
ACACTGTCAC ATCCTTTCTT GGAAGGGCAC TGACCATCCG TGCACTGCCA ATAACCCAGA 180  
GAGCTGCTCC GTTTCACTTT CACCCNNGGN CTTTATCAAC TTGTTCAAGT TCTGGNATCC 240



CAGCACATGA CAACACTTCA GAAGGGTCCC CCTGCTGACT NGAGAGCTNG GGAATATGGC 300  
 ATTTGGACAC TTCATTTGTT AAATTAGTGT ACATTTTAA ACATTGGGTT CGGNNAACTT 360  
 TCAGNGGTNA GGTCGGNGNN TN 382

5

SEQ ID NO:4658  
 SEQUENCE LENGTH:326  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05523  
 SEQUENCE DESCRIPTION:

10

15

GATCATTAAA AACTTAAAT ATATTTTATT AGAAAACATT TATCTATGAA TGAATATTTT 60  
 CTTGATGCTG GTCTCTGCAC ACATATGCTT GGTTACTTGC ATGCATTCAT TGGTTGTTCA 120  
 ATAAGTGAGA TGATTACAGA TAACTTAATA CTGTATTTNC CTTATATGGA AAACCGTTAT 180  
 AGACCCAATA ACACTAANC CTTTCAAAAG AAANTATTN CTATTATGAN TGTGATTTT 240  
 CATACCAAG AAGATGGAGA GTCTAAAATT TGGGNTATGG ATNCTNGATG GNNTTTTAN 300  
 TNGGNAAGCC TTCTNCAAG TTTNAN 326

20

SEQ ID NO:4659  
 SEQUENCE LENGTH:133  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05524  
 SEQUENCE DESCRIPTION:

25

30

GATCAGCTTT GCAGTAGATT ATGCTGCATC CTCGTGGCAA AATTCTGTAT TCTTAGTGAT 60  
 TGTACAAAC CCCTTTATTG CTGTCTGAGA AAGTGAAAGA TTGTGTATT CTATTAAAC 120  
 ATTTACAATC AAA 133

SEQ ID NO:4660  
 SEQUENCE LENGTH:264  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05525  
 SEQUENCE DESCRIPTION:

35

40

GATCAACATC CGGAGATGGA TTTNCCAAG GCTAAATTCA ACTAGCCCCT GTTTTTTCCT 60  
 CCCTGAACTC TTGGGGCTGA GCTGCAACCA CCCAACTTC TTCCCACTC TTCTCTGGGA 120  
 CTTGTGGGCC TCAGGGCTTG GGGCAGGCAT GGGACTGGCC CAGGCACACA GGTCCCGGGG 180  
 CATCAGGAGA AAGGCTGGGT CTTGGGACCT TGTCTCCCC AGTTGGCCTA CTGTTACACA 240  
 TTAACAGAT TTGCCAGNT CAAA 264

45

SEQ ID NO:4661  
 SEQUENCE LENGTH:319  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05526  
 SEQUENCE DESCRIPTION:

50

55

EP 0 679 716 A1

GATCACCTNT TCCCTTCAAT CCTTGTGGCT TCTGGGAATC TTCAGAGCCT GGGTCTGAAA 60  
GGTGTTCCT ACATGTCTCA GGGCTGGATG CAAACCTGGC TGGGGACCTG AGCATCAACT 120  
CCCATTTAGA ATCAGACATC TCCCTTCCCT GCAAATTGTC TACAACTACC AAATTGCTCC 180  
AGGTTTGAGA TGGTATTGCT AAATTTAAAA TTAACAAGN GACCCANCAN CAGCTTTTTA 240  
AAGTGTCTNC TATTCATNN GTATTTTNN NT AACCTTGGC CCCANTTGNT AGAAAAGTCT 300  
TTGCGNGAAA TGNATTNN 319

SEQ ID NO:4662  
SEQUENCE LENGTH:239  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05528

SEQUENCE DESCRIPTION:  
GATCAAAACA GTGTGGTGCT GGCAAAACAA GAGACATAAN TCAGNAGAAG AAAGAGTCCA 60  
GAATTAGACC CACACACATA TGGACAATTG ATTTTCAAT AAGGGCACCA AAGCCATTCA 120  
ATGTATAATA GAGAAGACAG TTTTTCCTAA CAAACAGTAT TGGANCAGTT GNNCANNATC 180  
AAAAAGTAAA CTTCANCCCA TACCTCACAC TATATCTAAA ANTTAGCATC AAATGGNTN 239

SEQ ID NO:4663  
SEQUENCE LENGTH:68  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05529

SEQUENCE DESCRIPTION:  
GATCTATTTA GTCCTACAAA TCAGGAGTGG TGTAGAGACA TCCAAATTTA AAGAAAAAAA 60  
AACACAAA 68

SEQ ID NO:4664  
SEQUENCE LENGTH:122  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05531

SEQUENCE DESCRIPTION:  
GATCGAGTTT TAAATTGATA GGAGGGAACA TGTCTAATT CTNCTGTCCT GAGAAGCATG 60  
TAATGTAAAT GTTATATCAT ATGTATATAT ATATNTNCNC TATGTATATA CATATATNTN 120  
AN 122

SEQ ID NO:4665  
SEQUENCE LENGTH:196  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05532

SEQUENCE DESCRIPTION:  
GATCAGGGAC GGGGCTGAGC TGGAGAGTGT GCAGGATTGA TTAATGATGT CTGCCACGGT 60  
CAGGCCAACT GCTGTGTTTC TGGGGCCAC AAGCTAAAAA TGGTTGAAA AAAATCAAAA 120

CATTAATATT TGTGACATAT GAGAATGCTA TGAAAGTCAA CTTTGCTATC CATAAATAAA 180  
GTTTTATTGA CATAAA 196

5 SEQ ID NO:4666  
SEQUENCE LENGTH:316  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
10 CLONE:HUMGS05533  
SEQUENCE DESCRIPTION:  
GATCAGATTG CTCAACTCCA TTATAATTTG TTTCCAACT AATCTGTTCA GGCAAGATAA 60  
AGATATAAAT GTGGATTGTT GCTGAGGTTA AGTCTGGTCA GATTTTNCCA NTTATGCTTG 120  
AAAAGTAACC ATATTTCAAT CAAATATATA ATATGTATAT NTCATAATAA TATANGCAAT 180  
15 ATTAGTCTCA TTAITAATC AAAANTCTCA TCTATATTTT ANCACTGTAG AACATTATTA 240  
NNTGANTAAN TGACCTATAA NTATTTGGTG CCTGANGAAG TCACTTTGCT ATTANTNATA 300  
CGGTGTAGNG TGTGGN 316

20 SEQ ID NO:4667  
SEQUENCE LENGTH:168  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05534  
25 SEQUENCE DESCRIPTION:  
GATCTCAGGG AAGCCTGGGA GTCCCTTCTC ACCCCTCAAC CTCCGGAGTC CAGGAGAACC 60  
CGTACCCCCA CAGAGCCTTA AGCAACTACT TCTGTGAAGT ATTTTTTGAC TGTTTCATGG 120  
AAAACAAGCC TTGAAATAA ATCTCTATTA AACCGCTTTG TAACCAAA 168

30 SEQ ID NO:4668  
SEQUENCE LENGTH:311  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
35 CLONE:HUMGS05535  
SEQUENCE DESCRIPTION:  
GATCATCCCA TCCTTGACCA CAGGGACAAG AGGGGCCCCC TCGCCCCAGC CCCACCCAC 60  
ATGGAGCTCA GGGGGAAGCA GGGAGGGGTT CCCAAAAGAG CCCTGCGGAG GCTAGGAGTG 120  
40 GTTCTTGATG CTCACCTGAA GCCCCTAGAC GCTGCTAGGA GGGGGGGCCC TCCTGGGCCC 180  
NAAATACCN TCCGCTTGCC GCTGCTAGCG NACCCCTGCA GTCCAGCGTG CATCCACCCC 240  
ACGNACGTCC CGTGCTGTGT TCCTGGGCCN TGTCCATGGC CTNAATAAAC TCTCTGCTTG 300  
GGTGTGACAA A 311

45 SEQ ID NO:4669  
SEQUENCE LENGTH:167  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
50 CLONE:HUMGS05536  
SEQUENCE DESCRIPTION:

55

GATCGCAAGC TGTTGATGCA CAGGCGTCTT GTTGGCAAGC CCAGCTTCAG TTTATGTTAG 60  
 ACAATCAGTA CACATGCTGG TGTGTTTTCC AATGGCCAGT NATAAGAAAT TAAATAAGTA 120  
 TTTGTGAGAT TTGCTATTTT TTAATAAAGT AATTNTTTTA AATTAAA 167

SEQ ID NO:4670

SEQUENCE LENGTH:118

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05538

SEQUENCE DESCRIPTION:

GATCTCATAC TTGTATAGAG TAATAACAAC AGTTGTACTT CCACCAAAGG CATGTGGCAT 60  
 ATTACCAAT GTCATGTATT CTGAACAAAG GCAAAAAATA CAAATTCCTA CCATTAAA 118

SEQ ID NO:4671

SEQUENCE LENGTH:311

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05539

SEQUENCE DESCRIPTION:

GATCCTTCAA ATAGGCCCTG AGATGTGAGG TCTGCTGCTT CACTGGGGCC CGATGACTTT 60  
 GGCTGGGGGA GGGGGCCTAG GGCTCTNCTC ATTGAAAGCT CTGCTTTATA CAGACCCAAG 120  
 CATACACACC AGGCCGTCAC TTTGGGTTCT GGCATAAGTT CAGAACAATT CAAGTCCATG 180  
 TGTCCCATGG CTGCTCAGAG CCCTGGGTCA AAACCACTCA GCCCAGGGGA GGGGATGAGG 240  
 CATGTGCACC CTAGACCCTT CTCCTCTCT CCCNCACCAT AGTGTGCAAT AAAGTGTCTG 300  
 TTCTTACCAA A 311

SEQ ID NO:4672

SEQUENCE LENGTH:338

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05540

SEQUENCE DESCRIPTION:

GATCTTGTC GAGCTGCACC TCTCTGTGAA CTGGCCATTC CTTTCGGTGC TGCTGTCCTT 60  
 TTTGGGGGGG TTCCTGATTT CTGTATACAT GTAGCTTTGC CAGATATGTA CTTAGTAATA 120  
 TAAACTGTAT TAATAAAATC CATTTACTGT GTAATACACG AGTTTAAAAA TTAAGAGCGA 180  
 TTAGCTGTTC ACTTTGGTAA CAGGTAGTTA AGTGTACAC AAGGTGTTGT TGCAATGGCA 240  
 TGACGGTGAC CTGTTGGNGG NACTAAGCCT TACAGCAAGG CATGTGCCGN ACGTGTCTCCG 300  
 TGGTACTTAG AGCCCTGGGG GCCCCGNTCG GACTCCGN 338

SEQ ID NO:4673

SEQUENCE LENGTH:117

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05541

SEQUENCE DESCRIPTION:

GATCTGTTTA CAAGGTTTGT AGATACTTTT TTTGTTCTG TTCATAGATG GGAAGCTTCC 60  
 TTATAACTGA TGCAGAGAAA AATTAGTCCT TCAAATACTG CTGTATTTTC AGGAAAN 117

5 SEQ ID NO:4674  
 SEQUENCE LENGTH:279  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05544

10 SEQUENCE DESCRIPTION:  
 GATCAGTGTT GCTAGTAGCT TGGCAGCTCT TCATAAAAGC ATATTGGGTT GGNAAGGTGT 60  
 NTGCNTATTT TTCAAATNAT TTAATAGATG TNTGGTACCA TTTAAAAGTG GTTGTGTCTG 120  
 AATTACTGT GGGGATAACA TACACTGTAA TGGGGAAAAA TTACCTAAAA CCAATTTCAA 180  
 15 AANGGCTTTC TNTGTATTTT AGTTTAAAAA CCCAGTGCAT GATNCGCCCT CTGGAGATGC 240  
 AATAAACNCC TTNGTGCCAA AGGNGATTGC CNGNGGAGN 279

SEQ ID NO:4675  
 SEQUENCE LENGTH:137  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05545

20 SEQUENCE DESCRIPTION:  
 GATCTGTAAT AAAATAGTAT ACTGGACTGT GCATCAAAGG GATGTAAAAT TACAGTATTC 60  
 CAAAGGTGA AGTTCTGCTG TTTTGTATA ATGCCTGATA CACATCTTGA ATAAAGTCTT 120  
 AACATTTTNC TTATAAA 137

30 SEQ ID NO:4676  
 SEQUENCE LENGTH:259  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05547

35 SEQUENCE DESCRIPTION:  
 GATCATAAAA ATTAAAAATGT GAATGTCAAC AATAAAAAGC AAGACTATGA AAGGCTCAGA 60  
 TTTCTTGCAG TTTAAAATGG TGTCTGAGGT TGTNCTATTT TGGCCAAGTC TGTAAGAAAGC 120  
 TGTCAATTGA TTTNATTAT GTAGTTCATC CAGCCCTTGG GCATTGTTAT ACACCAGTAA 180  
 40 AGAAGGCTGT ACTCAAGAGG AGGAGCTGAC ACATTTCACT TGGCTGCGTC TTAATAAACA 240  
 TGANTGCAAG CATTGGAAG 259

SEQ ID NO:4677  
 SEQUENCE LENGTH:261  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05548

50 SEQUENCE DESCRIPTION:  
 GATCATCATG ATGAGTTTTG CCTTATGCCT TGAATCTTNA GGTTAATAGT CATAAAAATCC 60  
 CTGCTTTCTA AATTCGCATT TTTCTGGTG TACCNTTAAT GTGAACNTTT TGGCATTCTT 120

55

CTGCAATNTT CTGATTGGAG ATTGCATTTT GACCTAGTCT GTAAGTTTTT CTGTCAGAAG 180  
 AGGACTTTCA TCAACTTTCA NGGNAAGATT GTTTATTGGC ATACTGTAAA GTTAAGTNAN 240  
 GCANTTTNAA AGTNGTCTAA A 261

5

SEQ ID NO:4678  
 SEQUENCE LENGTH:183  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05551

10

SEQUENCE DESCRIPTION:  
 GATCCGATTT TACCTTGGAC CCCTGCGTCT TGCCCCTGGG AACCCANATG GGGACTGCTC 60  
 TGAACCTTTG GATGACATNT GTGGCCCCGG AGATGTTCTC AACCCAGGGG TGCCCTTCGT 120  
 AAATGTTNCT CCATCCTCAC TGTACCAGGA GTGTGTGAAT AAACACAGAC CCCCTCTGTG 180  
 AAA 183

15

SEQ ID NO:4679  
 SEQUENCE LENGTH:234  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05552

20

SEQUENCE DESCRIPTION:  
 GATCCCAGTG ACGTGGAAAGT CATCAGAACC CCACGGTACT TTGAGTACCT CTCTGCACCA 60  
 AGATAGCTGA CTGNTTTTCT GCTCAGTCAC AATTTTACTT GNAAGCAAGN ATTGTCCTAG 120  
 NTCCTNTTCC ATTATTCCAA AACGTTTAA GTTCAAAGCA GGGTCTCATT AAAANCCCAA 180  
 CTACTGGTTG ATATAATTGA GATATTACAA TTTCAGAATA AACATTTGAT TAAA 234

25

30

SEQ ID NO:4680  
 SEQUENCE LENGTH:316  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05553

35

SEQUENCE DESCRIPTION:  
 GATCAGAATC TTCAAGAATC AGTTAGGTTT CTCCTGCAA GAAATAAAAT GTCAGGCAGT 60  
 GAATGAATTA TATTTTCAGA AGTAAAGCAA AGAAGCTATA ACATGTTATG TACAGTACAC 120  
 TCTGAAAAGA AATCTGAAAC AAGTTATTGT AATGATAAAA ATAATGCACA GGCATGGNTA 180  
 CTTAATATTT NCTANCAGGA NAAGTCATCC CTATTCCTT GTNTTACTGC ACTTANTATT 240  
 ATNGGTTGA ATTTGTNCAG TATAAGCTCG TNCTTGTGCA AAATTAANTA NATATTNCTC 300  
 TTACCTNATA NCANAN 316

40

45

SEQ ID NO:4681  
 SEQUENCE LENGTH:304  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05555  
 SEQUENCE DESCRIPTION:

50

55

GATCATCCTG GAATCCGACT CTGTCTCAGC TCAAGGGGGT TCNGAGATTT CCTAAGCTAG 60  
 CCCTCTCATT TTACAGCTGC AAAACGGAG GCCTGTAAAT TCAGTCATTT TATGAAATCC 120  
 TTTGAAATTT TTATTGAGCT CTAATTGTGT GTGAAGTATT ATGGAATGCT TCTGTACTGG 180  
 AATGCATAGG TTGAACAAGA CAGAAAGGCC CAGATGGCAG AAGTTCAAGA NCTTTCACCA 240  
 ACCCATATAG NGAACCTAGT AATATTAATG ACTAATGTTA ATGGANTCCA TGCTTTGTTA 300  
 CGAN 304

SEQ ID NO:4682  
 SEQUENCE LENGTH:287  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05556

SEQUENCE DESCRIPTION:  
 GATCAAATCG GAGTACTTAG CATATCTATC ATCTCGTGCA TTTATCATTT CTTTGTGGCG 60  
 AGAACATTTA AAAATCCTAT TTTCTAGCTA TTTTGAATA TACACTACCT TACTGTTGCG 120  
 AACCATAGTC ACCCTACTGT GCAATAGAAC ACCTGAACTT ATTCCNCCTA TCTAGTTGTA 180  
 ACTTNGTACC CATTGNCCCC CCNTCCCTNC CTTCCACTCT CCCCTCCCCA GNCTCTGGTA 240  
 ACCACTGTTT TGTTCCTAT GAGATAAAAC TTTTITGNC TTCCAAA 287

SEQ ID NO:4683  
 SEQUENCE LENGTH:298  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05558

SEQUENCE DESCRIPTION:  
 GATCTTTTGA AGATTGCTGG AATACTGGTG TCTGTTAGAA TGCTTCAGAC TACAGATGTA 60  
 ATTAAAGGCT TTTCTTAATA TGTTTAAACC AAAGATGTGG AGCAATCCAA GCCACATATC 120  
 TTCTACATCA AATTTTCCA TTTTGGTTAT TTTTATAATC NGGTATTGCA TTTTGCCTTC 180  
 CCTGTTTATA CCTCAAAATG ATTCATACCT CAGTTTAATT CAGAGAGGTC AGTTAAGTGA 240  
 CGGATTCTGT TGTGGTTTGA ATGCAGTACC AGGNTTCTCT TCGAGCAAAG TAGACCTN 298

SEQ ID NO:4684  
 SEQUENCE LENGTH:297  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05559

SEQUENCE DESCRIPTION:  
 GATCCATCTT CCTTACACTC CTTCCAAAAT AATGTTAATA CTCTGTCTAT CAAATGCTTA 60  
 CAGTGTCTC TAGCACATAT AGGGTAAAGT CAAAGCTCAT TAGCAGGGCA TAGGAGGCCC 120  
 TTCATGACCA GCCTNACCNG CACCTCTAGC TACATCTCCT ACTGNNGNCA CCTCCACATT 180  
 TACCCITCGG CATGCCAACC TGCTTATGGT TACGGGGCAC AGCTTGCTGT TTTGGNTNNT 240  
 GTGCCTCCCN TTGTTTGTCT TCCTGNTGNT GAANTNATGN TGGGACCATT CTTGTGN 297

SEQ ID NO:4685  
 SEQUENCE LENGTH:120

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05560

SEQUENCE DESCRIPTION:

GATCAGATTC ACTGTTTCAT CATATTTATT GTAATATATT TTTTGTGTTG TAAATATGTT 60  
ACAACAAAAT GTGATTGGTC TAAATATTT GTAATGTATA TTAAAAGGTT CAAAAATAAA 120

SEQ ID NO:4686

SEQUENCE LENGTH:53

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05561

SEQUENCE DESCRIPTION:

GATCAGAGGA GTTCAGGGAG ACATACATAA AAATGTTAAT CACGGTTTTC AAA 53

SEQ ID NO:4687

SEQUENCE LENGTH:363

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05562

SEQUENCE DESCRIPTION:

GATCGCCAAG TGCAGGCACG GCATCGCATC CCCAGGTGTC ATCCTGTGAC CCAGGAGGGG 60  
AAGATGACAC ACCCAATTTA GGTAATGCTG CACTTCTNGT TATAATTGGT TATTGGAAAA 120  
TGTGCCTTTA TTATCAGAAC AGTGGTGTGC GCATTTCTGA TTATGGAGCT AACTTTTGGA 180  
TATCTGACTT AGATACTAAA AACATTTGGG TGTTCAGTT TTGCACTTGT AGATACAACT 240  
TAAAAGCATG AAACCTGGTGA TTAAATTAGA TGTTTCTAT AAAATGCACC TTGTTACATT 300  
TCTGTGAAAG GGGTCTTACC AGCGTGGAAT AACNTGGCTC AAGGGTTTGA GGGGANCANC 360  
NGN 363

SEQ ID NO:4688

SEQUENCE LENGTH:109

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05563

SEQUENCE DESCRIPTION:

GATCCACGTG TACTGGCACC TCAGAAGACC AAATCATGGN CTGTACAAGT CTCTATACAA 60  
TGCTTTTATC CCGTGGGCA GNANGCAATG ATGATAATGN CAANCAGGN 109

SEQ ID NO:4689

SEQUENCE LENGTH:369

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05564

SEQUENCE DESCRIPTION:

GATCAGAAAAG CATTCACTCC AGTCAGAATT CAAGGTGGGA AAAGTAGGTG TATTTCTGAN 60



5 CCATTG GGA AGGAAAATCA TTTTCTGAA CANCACTACC TGCATTTCTG TTTCTGCAGA 120  
 CAATCAAAAA ACAAAACANT AAAANTAAGT AAGTGAANGA AAGGCCANTT AGCATTATTC 180  
 ATTTGCCTTA GGTTCACAGG GTCACAGATT CATTAGCTTA ATTACATCCT CATTTTGGNT 240  
 GCCAAAGAAT GGAGCAAGAG CANTCAGTAT TGCTANCTGG CTCTTGCTTC TTCTTCCTGG 300  
 GTTTGTTTTG GTTTTNCAGA GAAACAGGGA AGNGAGGGCA TTNGCENNAGT ATAATTGGTN 360  
 TATAGGAGN 369

10 SEQ ID NO:4690  
 SEQUENCE LENGTH:70  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05565  
 15 SEQUENCE DESCRIPTION:  
 GATCATAAAT GACTTGCTG AATTCAATCA TTTTAAACAA GCCAATAAAG TTTGATAATT 60  
 CATCTCCAAA 70

20 SEQ ID NO:4691  
 SEQUENCE LENGTH:293  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05566  
 25 SEQUENCE DESCRIPTION:  
 GATCCTCAAG GCCTTGCTCT NCCCCGTGGA GACGCTTGCT CGGATGAGCT CAGGAAACAG 60  
 TACCGGCTGC GTGGCAGGTC TGGGTGTTGT GTGCGAGGAC GTGGCCTTG CACACCGCTG 120  
 TGTTCACAGA GGTCTTAGG AGATATTTTT TTTGTCTTA GGGGGACTGT NTAAGTTCA 180  
 30 GACAAATCAN GCTGGGTGTG GAGAGAGTCT GAAATACGTC AGTGAAGTAA GTAGCAGTGA 240  
 GCGATTGTGA ATTTGNANTN TAAATGGAAA ACCGGGTTTT TACCGGNGTT TTN 293

35 SEQ ID NO:4692  
 SEQUENCE LENGTH:251  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05567  
 SEQUENCE DESCRIPTION:  
 40 GATCAAACTC TTCATTGAAG TACTCATNAG GCGTGATGGC TGTGGGGTTG TTTGCAGTAG 60  
 CACATTNCGT GGTGAGGTCC TGCTGAGCCA GNACTCAGGA GAGTCAGAAA TGCCAAANN 120  
 TGTTACAAAG TGAAGGCCTG TGGCACTCAG TGTCTGAGGT GGACGTGTTA ACCAGCTAAA 180  
 GACCGGGAAG TTCTATTCAC TAACTTTTTT GCATGGAACA AGAAAACTCTA TGAGGATATC 240  
 45 ACCAAACTAA A 251

50 SEQ ID NO:4693  
 SEQUENCE LENGTH:97  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05568

55

## SEQUENCE DESCRIPTION:

GATCCATCTT GCTTTTGCCT TATATAAAGA CTACAGTTAT GGAAGTNTGG AAAACTGTGG 60  
CTTCTCAATA AATATTCAGA TGTCTAAGA NTATAAA 97

SEQ ID NO:4694

SEQUENCE LENGTH:106

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05570

## SEQUENCE DESCRIPTION:

GATCTCACAA AGTACAAAAC GAATGCCTTT CTTTCTTGT TTATAATGGT CACTCACTGT 60  
GTTTGTTTAC TGTCAAGAAA TCAATAAATG TGTTAACAA GTTAAA 106

SEQ ID NO:4695

SEQUENCE LENGTH:106

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05571

## SEQUENCE DESCRIPTION:

GATCAGTNGA TATTAAGATG AGATTACAAA TTTTNTTAAG TTCAGCCATT ATTACTTTTG 60  
GTATCCCAGA ACATGACAAA TTATGAATAA AACAAGTATA CATAAA 106

SEQ ID NO:4696

SEQUENCE LENGTH:149

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05572

## SEQUENCE DESCRIPTION:

GATCCATAAA ATTTTATTAA TCAAGATATC ATATTAAAGT ATTATTATAT TAATTATGA 60  
CACCAAAATTT TTAAACCAAT TTTATGTTTT TCCTTATGTA TCATTATAAA CCCTATTGCA 120  
TTTATAAGT AATANANTAT TTNAGAAA 149

SEQ ID NO:4697

SEQUENCE LENGTH:356

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05573

## SEQUENCE DESCRIPTION:

GATCGCGACG GCTGGTTTGC ATCGCCAGCT TCTATATATT ACGGCCTTTT TTTTGCTGG 60  
ATATTATCTT GTAAAACGTG AAGACTACCT GTATGCTGTG AGGGACCGTG AAATGTTTGG 120  
ATATATGAAA TTACATCCAG AGGATTTTCC TGANGAAGAT AAGAAAACAT ATGGTGAAAT 180  
TTTTGAAAAA TNCCATCCAA TACGTTGAAG TCTTCAAAAT GCTTGCTCCA GTTTCCTGA 240  
TACCTGCTGT TTCTGAATTT GNTGGGGCAT GTTCTTATG GCANTTGGAG GCTNATTGNT 300  
AATNTGTATG TTGGCACCTT GTNATTAATAA TACGGGGCCA TGNNANAAAA AAAAAA 356

5 SEQ ID NO:4698  
 SEQUENCE LENGTH:190  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05574  
 SEQUENCE DESCRIPTION:  
 10 GATCCACCTG CTTTGGCCTC CCAAATGTTG TGTCTTTTA AAGTATCTAC AGTAACCTTG 60  
 TATCAACTTA GTTTGTCAGT CTATTAATAC TAAATTTAGC TCCTTCAAAG CAGTTGGAAC 120  
 TATGTGCTAC ATAAATTCA GTTTCACCCA AGGGAAGAAG TGAAATTAGT GAATAGACAG 180  
 TTACAGCAAA 190

15 SEQ ID NO:4699  
 SEQUENCE LENGTH:81  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05575  
 SEQUENCE DESCRIPTION:  
 20 GATCCGNTCC CAGACGGCCT TGGACTGCTT GCATTTCCTC GGAGAAAAAG GGGTTAATAA 60  
 ATGGGCCATC CTTTCCTGAA A 81

25 SEQ ID NO:4700  
 SEQUENCE LENGTH:89  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05576  
 SEQUENCE DESCRIPTION:  
 30 GATCACTGTG GGGTCAAGAA TGTCTTACAT GTTTTATTCA TCATTCTTGA NGGAAGAAAT 60  
 AATCAAACC TTGGAATTAA AAAGTCAAA 89

35 SEQ ID NO:4701  
 SEQUENCE LENGTH:311  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05577  
 SEQUENCE DESCRIPTION:  
 40 GATCTTGGCA AGAAACCCTA ATCTCCCTCC AGAAACAGTG GACTCTCTAA AAAATATCCT 60  
 GACTTCTAAT AACATTGATG TNANGAAAAT GACGGTCACA GACCAGGTGA ACTGCCCCAA 120  
 GCTCTCGTAA CCAGGTTCTA CAGGGAGGCT GCNNNNACTC CATGTTACTT CTGCTTCGCT 180  
 45 TTCCCCTACC CCACCCNCCG GCATAANGNC ANACCAATCA ACCACGACAA AGGNAGTTGA 240  
 CCTAAACATG TAACCATGCC CTACCCTGTT ACCTTGNTAG CTGCAAAGTA AACTTGTTNGC 300  
 TGNCTGCAA A 311

50 SEQ ID NO:4702  
 SEQUENCE LENGTH:94  
 SEQUENCE TYPE:nucleic acid

55

TOPOLOGY:linear

CLONE:HUMGS05578

SEQUENCE DESCRIPTION:

5 GATCTCTCTT GCACGGGCCT TGCCAAGGCC CAGGAGGGAC TTGGGCAGTA TGTTCATGTG 60  
 GTCATATGTT TTTGTAAAA ATTGTGAAAG TAAA 94

SEQ ID NO:4703

10 SEQUENCE LENGTH:248

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05579

SEQUENCE DESCRIPTION:

15 GATCCGAATC CGACTGTGGG GGGCGGGCTG GGAGGTGGGA GCCGCGTCTC AGGCCCCGGCC 60  
 GTTATCAAGG CCCCTCCGCC CCCGAACCCT GGGGAGCTGG ACCAGGAGGT GGAGGCTCAG 120  
 GGGACCCCAT GGGGACAGGC AGAGCTGGTC TCCTCCAGC AGACGGAGCC AGGACGGGCA 180  
 CAAGAGTCTT GGAGGTTTGC GTGTTTCTGC TAGAATTAAA AAGTTAAATT TAAAAATGAA 240  
 20 AATGNAAA 248

SEQ ID NO:4704

SEQUENCE LENGTH:66

SEQUENCE TYPE:nucleic acid

25 TOPOLOGY:linear

CLONE:HUMGS05580

SEQUENCE DESCRIPTION:

30 GATCAGCAAA GTGAGACAAA AGAAGATACT TCCCCAAAGA AGAAAAAGAA AAAATTGAGG 60  
 CAGAAA 66

SEQ ID NO:4705

SEQUENCE LENGTH:65

SEQUENCE TYPE:nucleic acid

35 TOPOLOGY:linear

CLONE:HUMGS05581

SEQUENCE DESCRIPTION:

40 GATCGGGTCT CGGAAGGGAA GTAGCCATCA CACCATTAAA AAGCCTGTGG ACCTTTAAAG 60  
 GNAAG 65

SEQ ID NO:4706

SEQUENCE LENGTH:308

SEQUENCE TYPE:nucleic acid

45 TOPOLOGY:linear

CLONE:HUMGS05582

SEQUENCE DESCRIPTION:

50 GATCTTCTTA GGACATCTTT TTTAAAAAGC TGTTTAGTAT CATTTTGTGT ATATTGTTGA 60  
 AATGCTTTT CATCAATAGC AGTCANCAIT TTATCCTTTC TTTTATATT CATAATGTTA 120  
 TTTAAGTGTC ATTGATGTAC TGTATTGACT TGGGGTTTGC TTATTTGTTA CTTAACATGT 180

55

GTACATGCAT GAAAGCATTT TTNGTTGTTT CCTGATAGTT ACATTTCAAC CTTGGGATTT 240  
 TNCCAAATNA CTTAAGANGT TTAATGTCAG TNAAAGATTT TTTTACCCTC NTTTTGGGAA 300  
 CATCAATN 308

SEQ ID NO:4707

SEQUENCE LENGTH:323

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05583

SEQUENCE DESCRIPTION:

GATCCGGAAG ACCACGGCCA GCCAGGTGTA CGAGACATTG CTCACCTACA GTGACGTCGT 60  
 GGGCGCGGAT GTGCTGGACG AGGTGGTGAC TGTGCTCAGT GACACTGCGT GGGACGCAGA 120  
 GCTTGCAAGT GTGAGAGAGC AGCGCAACCG TCTGTGTGAC CTTCTGGGCG TACCCAGGCC 180  
 CCAGCTGGTG CCCAGCCTG GTGCNTGCTG AAGCCAGTCC TTGGAGCCCA TANCTACCCC 240  
 CTGCCTGGTG AGGATGTCTT GTTTCCTGAG GGTAGGCCCG TTGTGGAAAA GCCTCANNAC 300  
 NAGTGNTGCC TNNAGGCTGN GAN 323

SEQ ID NO:4708

SEQUENCE LENGTH:302

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05585

SEQUENCE DESCRIPTION:

GATCTTCCTT TGGAAACCAGG CACATTTGGC CCCTTCTCAG TGAAGTCACT GTGGAAGTCT 60  
 TCTTAAGAAA ATATTGAAAA CAGCTTAATG CTTTCATATA GTGACCGACA TTTAGTTGAA 120  
 AACTACTGCT GCATAGCAAA TATTGTGACT CTTTATGTGT CCACAGGAGC TCTTGTGTGG 180  
 GTTTAAAGCT ATGAAGTGTA TTCACATTGT GAAGTTTAA TTATCTTTAT TGAAATTAAT 240  
 TGTGTAAAAA TGGTATGTGC TCTATTAGGT ATTCAGTTTG TATGTGAATT CTATAAAGAA 300  
 TN 302

SEQ ID NO:4709

SEQUENCE LENGTH:302

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05586

SEQUENCE DESCRIPTION:

GATCCCTCTC AGTACTGGG AGCTGCTTTG TGCCTTGGA GCCTCAAGCT GAAATGGATG 60  
 TCAGCCTCAA GTTAACTCC AAGAGGGTTC ACCTTGTTTC TTTGAACAAA ATGTGCTGCC 120  
 TGTGCTTCC CTTTGCCAGG AGTGGTGTTT CCTTTTCCAC AGGTCTGGAC CACAGTGTCT 180  
 CTAGCTCCCG CTCCTGGATA CTTGGTTACT GTGTGTTTCG GAAAAAAGG ATNCACAACA 240  
 TGAATATNCA CTAAGCTGTA ACAGGGGCCT GCTGCANCTA TAGTATTTCC TGAAGAAAGTA 300  
 TN 302

SEQ ID NO:4710

SEQUENCE LENGTH:161

EP 0 679 716 A1

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05587

SEQUENCE DESCRIPTION:

GATCTTGCCT CTTTCCTCCT TCATGAAAGC AGCACACATT GTGTTAACTT ATGTCTCTTG 60  
TTAAATNAGC TTAATGTCTT TGTGTTTTGT CCAAACTGT ATTGNNNNA TATTGTTTAA 120  
TGCAAATNAA GGAATGCAAT AAAGAGTAAA TATACTTGAA A 161

SEQ ID NO:4711

SEQUENCE LENGTH:120

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05588

SEQUENCE DESCRIPTION:

GATCAGAGCG TGGGAGGAGG TGGGGGTGGA CGTCCATCCG GTGAACAGTG AAGGCGTTTG 60  
TGAGGTCTTT CTGGTCCCAG CATGAAATAA AGCCTTGGCC TGGGGGCCGC TTCATTCAA 120

SEQ ID NO:4712

SEQUENCE LENGTH:297

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05589

SEQUENCE DESCRIPTION:

GATCTGGCAG TACCCAGCCC TTGTGTGTGT GCGTTANTCA GCACCTGCCC ACACTGCGAG 60  
CCCCCGTAGG ATGTGCCTTG TCCTTCCCTG TTTCAGCACT TAACACACTA CCTGGTACAG 120  
AGTATGTAGT GGGCATCTGT TGAATGAATG CTTTCCCAG TAGCAGTGTA TTCATACAAT 180  
ATTAATATAA TTGTCCCCTG GCTTACAGAT ANAAATGAAA GCATCAAGTG CCCAGTTGAG 240  
TGAGACCCAG GTGTTCTTCC TNCACCCCTT AGTGGTTCCC CTGGGGGCAG NTCTTTN 297

SEQ ID NO:4713

SEQUENCE LENGTH:67

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05590

SEQUENCE DESCRIPTION:

GATCTCTGCG CTAGGTCGTT TACCGCTATT TATTTTATG GGGAAAATAA AACTCTCAA 60  
AATGAAA 67

SEQ ID NO:4714

SEQUENCE LENGTH:50

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05591

SEQUENCE DESCRIPTION:

GATCACTAGA TGATTCTAAC ATCGAAATAA ACCTCTTTT ATATGGCAA 50

SEQ ID NO:4715

SEQUENCE LENGTH:233

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05593

SEQUENCE DESCRIPTION:

GATCTGGTGC GTGTGGCCCT GTGGGAGTCC ACTTTCCTCT CTCTCTCTCT CTCTGTNCCA 60  
 AGTGTGTGTG CAATGTTCCG TTCATCTGAG GAGTCCAAAA TATCGAGTGA ATTCAAAATC 120  
 ATTTTNTTT TCCTCCTTNT CAATGTGATG GAATGAACAA AAAGGAAAAA ATTCAAAAAA 180  
 CCCAGTTTGT TTTAAAAATA AATAAATANA GCAATGTGC CANTTAGCGT AAA 233

SEQ ID NO:4716

SEQUENCE LENGTH:282

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05595

SEQUENCE DESCRIPTION:

GATCTTGCCCT TGAGGAAGAC CCAGGCCATG TTCCCAAAGG NCAGCGGGGG CCCTGGATTG 60  
 TAATGCAGCC TCGGGACAGG GCTGAGGCCT GCGGGGGAAG ACCTATACCC CACGACTGGG 120  
 CCTGNTTCA CCTCACCCTA ATCCCCGGG AGGAGCTGAC TGATGCAAAA AGCTGAGGNN 180  
 GCCTGCTGGG NNGTGGCTGT TTTNATGNCC CAGCCCCGNN AAGTTGGGGA GTGTTTGTGG 240  
 GGGTNCAGAG CCTNCCCCA GNCAGGAGAG AACCTTCCTN TN 282

SEQ ID NO:4717

SEQUENCE LENGTH:80

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05598

SEQUENCE DESCRIPTION:

GATCTAGGAC TAATTCAAGG GTCTAGATTT ACCTCCAAAC TTTGTTTATC TACAAAAAAT 60  
 AAAACTCTAT CTTCTTTAAA 80

SEQ ID NO:4718

SEQUENCE LENGTH:204

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05599

SEQUENCE DESCRIPTION:

GATCCTTCCC CTCTCAGACA CCCCTCTTTC AGCTTAGAAT TTGGGGAACC TATAGAGAAG 60  
 TCACAGAATC CCATGAAAGG GAATGGGGCA GGAGCCAGGG GTGTTTTTNC CCAGTGCAGG 120  
 GTTGTGTCTT TGTGTCTCTG TCTCTGTGAC TGTAATCCT GCCCTGCCCC ACTCCCAATA 180  
 AAAGCTTTGG TGTATAGGCT CAAA 204

SEQ ID NO:4719

SEQUENCE LENGTH:83

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05600

SEQUENCE DESCRIPTION:

GATCAGTTTG TTTCTTTCTG TGCTGGTAAC AATAAGCGTC GCACAGACAT GGTTTCAGGT 60

AANTAAATCT ATTCTATGAT AAA 83

SEQ ID NO:4720

SEQUENCE LENGTH:289

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05601

SEQUENCE DESCRIPTION:

GATCTCTGGA TTGTGTTATG TCAGTGTGG TAGGTTAGGA ACTAGATTTC CCAGAATCCA 60

TTCCATTGT NATTCATGA TACAATTGAC CAGTAACCTA TCTTACATGA GATTCGGAAG 120

TAAGTTAAGA AGGCATTAGT CATGGTTTGG AAGCACCATA CAGGGAGACA GCTGTGTGAA 180

TACAGGCTGT ATGGACACTT GCTTCCATCC CATTNNCTG CTTCTTTGGG TTGCCAATCA 240

AGTGTATCCT CAAAACGACT TGACTTTAAT TTTCTCGGAG GTGATAGTN 289

SEQ ID NO:4721

SEQUENCE LENGTH:235

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05602

SEQUENCE DESCRIPTION:

GATCAAGTCT TACATGCCCA TTCAGCTTCT AGGCCCCCT CACCTCCCTG CCCTCATTCA 60

CAAGTGGCCC TGAGACACGT GAACACCTCC CTNCTATGCA TCACAACTT TCTCCACCGA 120

GCTTTGGTGC TTTNGCCTCT GGNACACCTA ACTAGCATTG GCAGAGGAGA GTCTACACTC 180

TNTTCTNAT TCAGGGTNGA TGCTTTAAGA AATNCTGNCT CTTGTGNANG CAGAN 235

SEQ ID NO:4722

SEQUENCE LENGTH:276

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05603

SEQUENCE DESCRIPTION:

GATCGTCAGC ATCATCGGAG GCATCAGTTC CTTCTTCATC TTCATCTTCC CAGGTTTGTG 60

CCTCATCTGT GCAATGGGTG TCGAGCCTAT AGGACCAAGA GTCAAGTGCT GCCTGGAGGT 120

CTGGGGAGTG GTCTCTGTGC TGGTCGGCAC CTTNATCTTT GGGCAGAGCA CGGCGGCAGG 180

GTCTGGGAGA TGTCTGATG GGCAGCCAGT GCCGGGCAGG AAGGGGCCCT CCGGGGGCTG 240

ACCTACGTG GCTGCTGTAT GCAGNNGGGA GANCAN 276

SEQ ID NO:4723

SEQUENCE LENGTH:278



SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05604

SEQUENCE DESCRIPTION:

GATCAAGGTC ATAGAAAGTG AAGATTATGG CCAACAGTTA GAAATCGTAT GTCTGATTGA 60  
 CCCGGGCTGC TTCCGAGAAA TTGATGAGCT AATAAAAAAG GAAACTAAAG GCAAAGGTTC 120  
 TTTGGAAGTA CTCAATCTGA AAGATGTAGA AGAAGGAGAT GAGAAATTTG AATGACACCC 180  
 ATCAATCTCT TCACCTCTAA AACACTAAAG TGTTCCTGTT TCCGACGGCA CTGTTTCATG 240  
 TCTGTGGTCT GCCAAATACT TGCTTAANCT ATTTGGAN 278

SEQ ID NO:4724

SEQUENCE LENGTH:280

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05606

SEQUENCE DESCRIPTION:

GATCTGGAAT GCNACCGGAG CACTTGCTCT GAGGAATCCC AGGGTGACTC TGTCGGGGAA 60  
 GAATCCGGTC ACAGCCTCCC CTCAGAGACA GGCCTCANTT CGAGGGCAGC CCATTATCTG 120  
 TCGCAGCATC TGCCATGTCC CTNAGACTGC GGGAGGCAGG GNATGCATGG GTGTCCCAT 180  
 CTGTCCCTGG TGAGAAGCAA GGCTAGCTCT GCCTTCCACA TGCTTNTNAG GATGCCAAGA 240  
 GGCCTAGGAA CCCAGNAACC CCCTGNGAG GAGCTGTGNN 280

SEQ ID NO:4725

SEQUENCE LENGTH:253

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05607

SEQUENCE DESCRIPTION:

GATCTGCATT CACCTTAGGG CTTAGCCTCT MATTTTATGA ATTTTCAGGC TGTGATTNGT 60  
 GTTGGATGGC TAAGNTCTAA GATAATGCAA ATAGCCCCAA TCTTTAAATA TAGCGGTGCT 120  
 AAGTTGAACA NGTAACACAN TACAGAAAAT GCTGATATGA ATACTTAGTA ATAATACAAA 180  
 AGTTCTGCT AAATTATATA TGTGTATCAC TGCCTGNCNN GANACCCAC TTNNCTTTTC 240  
 TAATCCAGCN CAN 253

SEQ ID NO:4726

SEQUENCE LENGTH:301

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05608

SEQUENCE DESCRIPTION:

GATCCAGATA GCCTAGGGTG AGGGTGACAG AGGGACAGTG GGCTATGCCA CTAGGCCCTG 60  
 GTCTGGCTTT GGAAAGACCT NTGAGGGGAA ACCTTCACCC AGCACCCATG CCCCCTCTG 120  
 CTGAGGCCAG AGGAAGGGAG GCCTGAGGGG CAGATTNGTT CATGCCCTGGG GTGGAGGCTA 180  
 AGCCTGGACA CAGTCAGGGC GGGGCTGGCC AGCTGTGCGA GAACACAAGC CACGCCCTGCN 240  
 ATGGTGCTGC ACCCCTGGGT GTCCCTGCCT TGGCCCTGCT CTGGTCACTT CAAACATNGT 300

N

301

SEQ ID NO:4727

SEQUENCE LENGTH:295

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05610

SEQUENCE DESCRIPTION:

GATCATAAAA CAATAAAAGT AGTTTTCTAA TGTTGCTCAT AAAGTGGGAC TGAATATCAT 60  
 TTCAAATCCA GGAGACAGTC CAAAAATGGT TATTGAGCAN TGCCACATA TTGAATAAA 120  
 AATTTTNATT TTCAGTCTGT GTTTGGGAA AACAGCATT CATTGCATAG GTGGATAAGT 180  
 NCTAGAATAT TGGCTAANCA TATNGTCATT TGCTATAATG CATATGCATT NCAGAAAGTTT 240  
 TCTNGCTCCT GANGTATNAT GGGGGGTTTT CTAGCTCCCN TATNGCNAAA ANTTN 295

SEQ ID NO:4728

SEQUENCE LENGTH:99

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05612

SEQUENCE DESCRIPTION:

GATCACTTGA GCCAGAGGTT AAGTCTGCAG TGAGCTGTGN TTGTACCACT GCTCTCCAGC 60  
 ATGNGCAACA GAGCCGGACC CTGTCTCACC AAAGNCAAA 99

SEQ ID NO:4729

SEQUENCE LENGTH:329

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05613

SEQUENCE DESCRIPTION:

GATCCATTGT CGGGAGCTTG TGGCACATCA CCTTTCTACT CTGCAGTCTT CCCTGCCTCT 60  
 NAATTCCGTT TATGTCTACC GTCCCCTCAA GCACACCCTG GTGACCTGTG ACAAAGGAGT 120  
 GTTCAGATTA CATCCCTCCT CTGTCCAGG CCCAGACTTC TCCAAGGACA ACAGCAAGCC 180  
 AGAAGTGCCA GTCAGAGGTT NAGTAGCCTT TTACCATCAT CTCCAGNTG CAGTGGGTG 240  
 CAAGCAGACC TCTACTAAAC GNAAAGTAGA GGGAAATGNN AGTGGATGAC TTNTGTGATG 300  
 GANTCAAACG GCTCTATAAT GGANGGTTN 329

SEQ ID NO:4730

SEQUENCE LENGTH:140

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05614

SEQUENCE DESCRIPTION:

GATCCTGCCC TTTCCTGGGT NGGTGGGNGG TATAAGCACT GCCACCAGAA CTGTTGGGTG 60  
 CTAGCTTCAA AGCCCAACAC AAGAAATACT ACCAATTATG AAATTACAAC AACAANTNTA 120  
 AATGACATAA TTTTTTGAAA 140

SEQ ID NO:4731

SEQUENCE LENGTH:190

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05615

SEQUENCE DESCRIPTION:

GATCCATAGG ACTACCGCAG CCCGGACTCA CCAACTTGCC ACATGTTCTA GGTTTCAGCA 60  
 ACAAGACTGC CAGGTGGTTG GGTTCGCTT TTAGCCTGGA CCAAAGGGAA GTGAGGCCCA 120  
 AGGAGCTTAC CCAAGCTGTG GCAGCCGTCC CAGGCCACCC CCATGGAAGC AATAAAGCTC 180  
 TTCCCTGAAA 190

SEQ ID NO:4732

SEQUENCE LENGTH:159

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05616

SEQUENCE DESCRIPTION:

GATCCCAGCC AGGAAGGCTG GGGGCCCTAC TGTTCGTCCC CTCTGGGCTG GGGTGGGGGN 60  
 AGGGAGGAGG TTCCGTCAGC AGCTGGCAGT AGCCCTCCTC TCTGGCTGCC CCACTGGCCA 120  
 CATCTCTGGC CTGCTAGATT AAAGCTGTAA AGACATAAA 159

SEQ ID NO:4733

SEQUENCE LENGTH:295

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05618

SEQUENCE DESCRIPTION:

GATCACAGAC AAGCTGGGCC TGCATTCCCT TCGTCACCGT AACTGGTACA TTCAGGCCAN 60  
 CTGTGCCACC AGCGGGGACG GGCTGTACGA AGGCCTGGAC TGGCTGGCCA ATCAGCTCAA 120  
 AAACAAGAAG TGAAAGCCAG ACAGCCCTAA CAAAGCACCC CACCCACCCC TGACATACCT 180  
 ACTGTNACCC TGCCCCAGTC CTACCCCTTC CTCTCCATGC AAGTNTGGCC AGGGCCCTGG 240  
 GTATCATGTC CACATGCCCA GCAAGAGCCT TGCCTNCCNT TGCCTGCNCT GCTTN 295

SEQ ID NO:4734

SEQUENCE LENGTH:295

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05619

SEQUENCE DESCRIPTION:

GATCCACCCA CCTNGGCCTC CCAAAGTGCT AGTATTATGG GCGTGAACCA CCATGCCCAG 60  
 CCGAAAAGCT TTTGAGGGGC TGACTTCAAT CCATGTAGGA AAGTAAATG GAAGGAAATT 120  
 GGGTGCAATTT CTAGGACTTT NCTAACATAT GTCTATAATA TAGTGTTTAG GTTCTTTTTT 180  
 TTTTCAGGAN TNCATTTGGA AATTCAAANC ANTTGGCAAN CTTNGTATTA ATGTGTTAGG 240  
 TGCAGNGGN CATTGGTATT CTGGGCACCT TCCTAATATG GCTTTACAAT CTNNN 295

SEQ ID NO:4735

SEQUENCE LENGTH:259

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05621

SEQUENCE DESCRIPTION:

GATCTCAGCA ACAGCTGGGT AATAAGACTA GCATAGCTCA AACTATCCTG CCAAACGCTC 60  
 TCATCTGATT TTNCCTCCCT TCTCCCCAA CCTCCAATCA CCCTGAGTCA CCTGTAAATN 120  
 CATTGTNAT TCAAAGCGGA ATAACANGTT GTCCTAGCA NNNCCGCTGA GCGCTTTATA 180  
 ATTTNTGGT GTATTTTGT NAGTAGGTAG CAGAGGCGGA NGTATTTTN GGTGTAATTC 240  
 TTGANATTTT CTGACAGG 259

SEQ ID NO:4736

SEQUENCE LENGTH:232

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05622

SEQUENCE DESCRIPTION:

GATCACTGCA TGTTATGATG GCTTGTAAGT GCGTTGTAA GACTTTTNT TCAGTGTG 60  
 TNTCCAGTA TTTGAACCTA ATTTAAAGAA AAAGACGTTT CCAAGTTGTA TTTATTAAT 120  
 GTNTTNC TACCTTTG TNCTGCTACT TTNCTAATCT CATTAGCTTA GCTGTGTTG 180  
 TNCATAGGT ATATNTGGTA ATAAATNTAT AGAGTGTNG TTGTCATCGA AA 232

SEQ ID NO:4737

SEQUENCE LENGTH:138

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05623

SEQUENCE DESCRIPTION:

GATCTGTAAG TTTATTGCT CAATGTACGA CAGCTACATA ATGACTCACA TTCATGATAT 60  
 TCCATCACTG AGGAAACTGC TAAAGATGGT CCGTGTGTGA AATAATCCT TAGAGAAACA 120  
 CGGAGCTGGA AAAATAAA 138

SEQ ID NO:4738

SEQUENCE LENGTH:135

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05624

SEQUENCE DESCRIPTION:

GATCCAACCTG GACAACGTGT GGGATGGACC TGGAAACAAG CACCTCCCCA AACACATCAC 60  
 CACTCCCTAG GCGGGGCT GTGCATGCTC TCGCATGACA TCTCCATGCT GGTTCCTGCA 120  
 TAGCATAAAT GGAAA 135

SEQ ID NO:4739

SEQUENCE LENGTH:64

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05625

SEQUENCE DESCRIPTION:

GATCGATGTT AAACGTCACA GCAGTACTTT GCTCAATAAA GGTCATATTG GAAACATAGT 60  
CAAA 64

SEQ ID NO:4740

SEQUENCE LENGTH:117

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05627

SEQUENCE DESCRIPTION:

GATCTGTGGT AGGGTATTGA GGGATGAGGG AGAAAAACGA CCTAATTCAN GTAGGACTNG 60  
CAACGGCTCC CACCCTCCCT GGGGACANGG NTTAATAAAA ATTGACATCA CAAGAAA 117

SEQ ID NO:4741

SEQUENCE LENGTH:244

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05628

SEQUENCE DESCRIPTION:

GATCAGAAGG GCTGCGTGTA GCACCCTTAT GGTCTTGCAG AACACACCAA GAAACCCGAC 60  
GGCTTCCATA TTTNCTGACC CTACAAACAG GTGCCTAATA CTGATGTGGA GAAAGCTCAA 120  
GAGGGAATCA TCTGGCCTGA GCCTACCATG AGGCTGTTTG TGGTNCTGGC AGAAAAGCAA 180  
CAACTCGCTC CCCTTCCCAT GTATCAGTGA AAACCATTAT GCAAATAAAG AGCTGGGCCC 240  
CAAA 244

SEQ ID NO:4742

SEQUENCE LENGTH:209

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05629

SEQUENCE DESCRIPTION:

GATCTTTTTT CCTCCTTCTG TTTATNTTTT TGTITGTTTT ATTTATAGTC TGATTAAAA 60  
CAATCAGATT CAAGTTGGTT AATTTAGTT ATGTAACAAC CTGACATGAT GGNGGAAAAC 120  
AACCTTTAAA GGGATTGTNT CTATGGTTTG ATCACTTAG AAATTTTATT TNCTTATAAC 180  
TTAAGTGCAA TNGAANGNGT TTTNCAAA 209

SEQ ID NO:4743

SEQUENCE LENGTH:265

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05630

## SEQUENCE DESCRIPTION:

GATCATATAC TGTATATATA AAANNNTGA GATGGTAGAA ACATGTATGA NTGTACTAAG 60  
 TAGTATTCCA CTGTACTCAT TCATAAGGTA GGTITTCTTA CAAAACTCAC ACCAGGTACT 120  
 TAAAGATGTG CTCTGCTTTT TTCCAACCTAC GGAGTGTAC TGCTTTCTAG GTCAGTCCCT 180  
 GCAGACTCTT CTCAACTCTT TCCCTATAGG AACTTACTC CGCGTCCTGC CCCCACCTCC 240  
 TAAATAAATA ANGGAATCGG CGAAA 265

SEQ ID NO:4744

SEQUENCE LENGTH:177

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05631

## SEQUENCE DESCRIPTION:

GATCCCTAAC ATACTGTACT ACTTGCTTNT ACAATGTGTT AGCAGAAACC AGTGGGTAT 60  
 AATGTAGAAT GATGTGCTTT CTGCCCAAGT GGTAATTCAT CTNGGTTTGC TATGTTAAAA 120  
 CTGTAAATAC AACAGAACAT TAATAATAT CTCTGGTGTA GCACCTTTTA CTGTAAA 177

SEQ ID NO:4745

SEQUENCE LENGTH:377

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05632

## SEQUENCE DESCRIPTION:

GATCAGCCGA AGAAAGCAGA AGCTCTGGAG GCTGCCATCG AGAACCTCAA TNAAGCCAAG 60  
 AACTATTTTG CAAAGNTTGA CTGCAAAGAG CGCATCAGGG NCGTCGTTA CTTCCAGGCC 120  
 AGACTCTACC ATACCCTGGG GAAGACCCAG GAGAGGAACC GGTGTGCGAT GCTCTCCGG 180  
 CAGCTGCATC AGGAGCTGCC CTCTCATGGG GTACCTTGA TAAACCATCT CTAGAGAGGA 240  
 CATCCCTGCT GGGCTGCTGT GCAGAGTATA AGATTTTGGA CTTGTTCATG TCCCCTCTCT 300  
 CCCTATAAGG GGTGTATTTG TGACACCCTA TCTNGTCANT AAACAGCATT TCTGATTAAA 360  
 AANAANAAAA AAANAAN 377

SEQ ID NO:4746

SEQUENCE LENGTH:89

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05634

## SEQUENCE DESCRIPTION:

GATCCTGAAG TTTTGGTCA ATAGGCTCTG TCTTCGTGAG AGACGGGCTG AGAGTCAGAA 60  
 ATAAATCAAC CATTNTGGT TTATTCAA 89

SEQ ID NO:4747

SEQUENCE LENGTH:55

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05635

## SEQUENCE DESCRIPTION:

GATCTTTCTT CTCCCAGCTA AGAGTTCTTC AATAAATTTA AGAAATACCT GGAAA 55

5 SEQ ID NO:4748  
SEQUENCE LENGTH:244  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
10 CLONE:HUMGS05636

## SEQUENCE DESCRIPTION:

GATCAGCAGG GACCAAACCA TTGCCACATC CCAAGGNTGA ACAAGCATGG CTGAGCACCA 60  
GAGTNTGCAC CAAGTNTGAN TTTAGGCCTG CCAAGTGGAT TTACACCCAG CACGTCCCAA 120  
15 ATTTGGGTGA GTGCATGCCA ACCCTGTAAA CATGTAGGGG TGGACAGGTC AACAGACAAG 180  
GTGACCCAG CNTCCCGGCA AACTTGATTA ACACATACTG GNCACAGCAA TTANNNGAN 240  
NTGN 244

20 SEQ ID NO:4749  
SEQUENCE LENGTH:184  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05637

## SEQUENCE DESCRIPTION:

25 GATCGCAGGG CCNTAGGTGC CTGGACCCAG GGTGTGCCAG CCCGTCTCTN TGCAGTCCCT 60  
GGAAGGGCGC TGAGAAAGGC ACCAGCTCCT TGGACCCAC CTCCCATGCT CTCACTCTCA 120  
TCCCCGTTCT CTTGTCCACA CAGCTCTTCC AATAAAGGTG TTTCTNTTCC TCCTTCTCCT 180  
CAAA 184

30 SEQ ID NO:4750  
SEQUENCE LENGTH:282  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
35 CLONE:HUMGS05639

## SEQUENCE DESCRIPTION:

GATCCTAGTT GCCTTTGTGT ATATTTACTG CCTGCTTGAG TGTTCCTATG TGTGGGTTTT 60  
CCCTGTATCT TGTAGAAATG TTGGGGTGT TCCCTCTGCC ATATGGCTCG TGGCCTGCGA 120  
40 GCCAACTATT TCAGNTGTGT TTNACCTTCA TTTTGTATGA GGTGATTTAA ANNTNGTTTC 180  
ACTTTGTGTA GTGAATTCCA CAGTAGTTTT CTGANTGTNG TTAAAAATGA CTTAACATAT 240  
TACACAGATA TTCAATAAAA ANGTTTTATT TCCTGTTGNA AA 282

45 SEQ ID NO:4751  
SEQUENCE LENGTH:65  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05640

## SEQUENCE DESCRIPTION:

50 GATCCCATG TGTATAAGTT AATATGTGAT AACTATTGAA TCTTGTACAA AAACAAAAAT 60

55

TGAAA

65

SEQ ID NO:4752

SEQUENCE LENGTH:159

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05642

SEQUENCE DESCRIPTION:

GATCCATCCG CGGTGTTGCC TGAATCAACC GTCATCCCT CGGATTGCTG AGCAGGATTC 60  
 ACAGGGTGGA GGCACCACAA TGTATCTGTG TCCCAGAAA GAATACTTGC AGTTTCCAGT 120  
 TGGACACTTT ATCAATAAAA TCACTATAAA CATCTGAAA 159

SEQ ID NO:4753

SEQUENCE LENGTH:352

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05643

SEQUENCE DESCRIPTION:

GATCTTGAGT TGCAGTCCAC AGCATTCACA TTCTCAGGAT AAACATGCTT GTCTCCATAT 60  
 ATACTATCTG TGCCTGTAAT GAATGAAAAA TCCATCCACT CTGCTGCCAT TCACAGCCTA 120  
 ATCTTCTGGA GTAGTCCAAA CAATGTTTGG AAAACATGG GACTGTATGT CATTACTATG 180  
 ACTGATAGCA GAATAATAAT GCATCTNACT TCTATATAGN GATAGNCTTA CATAGGTTAC 240  
 CCTGANATT CATTAGTNTG TCATANGTTT TAGGAAAGGT AGGACCCGGN AAGNNGTTCT 300  
 ANTTAGTTGT CTAATNTTT TNCAGTGNGC CAAGNNATTC ACCATGANAN AN 352

SEQ ID NO:4754

SEQUENCE LENGTH:297

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05644

SEQUENCE DESCRIPTION:

GATCGGCTCA AAGCCTGTCA GCAGAGGGAA GGACAGAACT ACCAGCAGAA CTGTATCAAG 60  
 GAAGTGGAGC AGTTCACCCA GGTGGCCAAG GCCTACCAGG ACCGCTATCA GGACCTGGGG 120  
 GCCTACAGTT CTGCCAGGAA GTGCCTGGCC AAACAGAGGC AGAGGATGCT GCAAGAGAGA 180  
 AAAGCTGCAA AAGAGGCCGN CGCTGCCACC TNCTGAGGCA GCTGTGGGTG CCCCTGCTGT 240  
 GTGGCTCTGT ATNACTTGTT TGCTTGAAAT NTAAAAGGCC TNGCAAACCC TGGGAAA 297

SEQ ID NO:4755

SEQUENCE LENGTH:126

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05645

SEQUENCE DESCRIPTION:

GATCCCAGGC CTGTGGCTAG CAGCACTGGG GACAGGAATG GCTGGTCCCT TGAGGAGGTC 60  
 GTGACAGGCT CAGCCTNGTN GTCTNGAGGG GACTCGGAAA TAAATTGTAG CAGCTTTCCT 120



GCCAAA

126

SEQ ID NO:4756

SEQUENCE LENGTH:317

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05646

SEQUENCE DESCRIPTION:

GATCTAAAA GTCAAAATC TGAAATTTAA TAATATGAGA CTTACACTGA NTATAATGTT 60  
 CATTAGAAG TTGCTGTGGT CCACTTCATT TATANGGAAC AAATATTTT ACAGTACACT 120  
 ATAGCAACAG CAAAAGCCCT CTCTACCCT GATAGGAATG GGTTCGCTGG GTGTCTAGAA 180  
 GTTAGATTCC TGCTGAATAG ANTTAGCCAT CCTTAAAGA TNTTAATCCA ATACTGAACT 240  
 GGTTTATAAA ANGCTTCTC TATTGTANTG NACTGTAAGT AGTGAAATTC TGTATATACT 300  
 GCTATTNGCT GNCTGTN 317

SEQ ID NO:4757

SEQUENCE LENGTH:228

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05647

SEQUENCE DESCRIPTION:

GATCAGTAAT CCTATTAAAG AAGCGGAAGA AGATACCTCA GAAAGGTCGG AAGAAAAAG 60  
 GTTTTCGGAG GCGGCGGTGA TTATGGGTGT ACATATTTGT ATATTTTGTG TCATCCTGAG 120  
 ATACTTCTAA TTTCATTGTA TATAGGTGGT TTCCCTGGA ATTCATTAAT TGTTTGCTTT 180  
 GGACATGTGG AAAGAGCCTT ACTAATAAAA TTGATTTTAC TTATGAAA 228

SEQ ID NO:4758

SEQUENCE LENGTH:312

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05648

SEQUENCE DESCRIPTION:

GATCAGTTCT GAAACAGTTT CTTTCTGAAA CAGAGAAAAT GTCCCCTGAA GACAGAGCAA 60  
 AATGCTTTGA AAAGAATGAG GCCATACAGG CAGCCCATGA TGCCGTGGCA CAGGAAGGCC 120  
 AATGTCGGGT AGATGACAAG GTGAATTTCC ATTTTATTCT GTTAAACAAC GTGGATGGCC 180  
 ACCTCTATGA ACTTGATGGA CGAATGCCTT TTCCGGTGAA CCATGGCGCC AGTTCAGAGG 240  
 ACACCCTGCT GAAGGACGCT GCCAAGGTCT GCAGAGAATT CACCGAGCGT GAGCAAGGAG 300  
 AAGTCCGCTT TN 312

SEQ ID NO:4759

SEQUENCE LENGTH:95

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05649

SEQUENCE DESCRIPTION:

GATCAAGGTA AGAAACATTG TAAAAAAGG TTACAAAAGT GCTATTTGTT TCCTAAAAAC 60  
AGTGATTTCT ATTAAGGAGG TGTGAGANCT GGAAG 95

SEQ ID NO:4760  
SEQUENCE LENGTH:336  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05650

SEQUENCE DESCRIPTION:  
GATCCTNITT CCANTNAAA GGAAGTGTAA GCTTTTATCT TTTAACCAAC TGAACAATAC 60  
ACCAAGGCA GCCTAGGGAT GAGCATTCT TTGAAAGCAA TTAGTTTATT CACCTGGTAT 120  
TAAACTATT TACTGTAAA AAATCTGTGA CTTGATGAAG TTGATTTNTA AAGGCAGCAT 180  
CANAACTGA NANGGAAGGG AAANANTAGG CAGCTTCTCT GCACTTGTTT GGAGCTCCCC 240  
AAANCAGGGT GCCATGGGGN AGTGGGCATC AAGNCCGGGC TGCCCTTTTCG NGGTCANCCT 300  
GTGGCAGTTC AGAGTCANGG TTTTCTCNC GCTGGN 336

SEQ ID NO:4761  
SEQUENCE LENGTH:310  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05651

SEQUENCE DESCRIPTION:  
GATCCAAATT CCCAGGTCGG CGCCTGCATC GTGAATTCAG AAAACAAGAT TGTGGGGATT 60  
GGGTACAATG GGATGCCAAA TGGGTGCAGT GATGACGTGT TGCCTTGGAG AAGGACAGCA 120  
GAGAATAAGC TGGACACCAA ATACCCGTAC GTGTGCCATG CGGAGCTGAA TGCCATCATG 180  
AACAAAAATT CGACCGATGT GAAAGGCTGT AGTATGTATG TTGCCTTGTT CCCTTGTAAT 240  
GAATGCGCTA AGCTCATCAT CCAGGCAGGT ATAAAAGAAG TGATTTTCAT GTCTNGATAA 300  
ATACCATNTN 310

SEQ ID NO:4762  
SEQUENCE LENGTH:364  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05652

SEQUENCE DESCRIPTION:  
GATCCCCCTCC AAGGAGCACC CATATNACGC CGCCAAGGAC TCCATCCTGC GCAGGGCCAG 60  
GGGCATGTTT ACTGCCGAAG ACCTGCGCTA GGGGACTCCT CATAGCCCTC AGCCCTTCCC 120  
TCGTTTCCAG GCCTCTCCCC AGGCTTGCCA TCAGCCTTCT TTAATTTTGT AGCCTCTGAT 180  
TTCCAATTCC CTGCTNCNNN CCACTCCATT AAGAGGCTAG GTGAGGCGCT TCTAGGTTGC 240  
TGGGGCTCTG CTGGTTAAGG AACAGGAAGC CTGACCATCT CCCTCCACTA CCTCTTCCCT 300  
GTGCTGTTAC ACAGTGTGAT TGTGATGTT AAATTAAGT CATATTCTTG CTCTTTCCG 360  
NAAA 364

SEQ ID NO:4763  
SEQUENCE LENGTH:333

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05653

5

SEQUENCE DESCRIPTION:

GATCGTCTGG AAGCAGCAGA GATGTACAGA AAAGCTGCTT GGGAAAGCGTA TTTGAGTAGA 60  
 CTTGGTGTTT GAGTGCTTCA GATACATTTT TCAGATACAA TNTGAAGACA TTGAAGATAT 120  
 GTGGTCCTCC TGAAAGTCAC TGGCTGGAAA TAATCCAATN ATTCCTGCTT GGATTCTTCC 180  
 10 ACAGGGCCTG TGTAAGAATG GGTTCCTGGAG TTCTCATGGG NCTTTTAGGA AATATTGAGT 240  
 AATTTGGTAA NTCACCGNAT TGGTTACTAT ANATAAGGTC CCANTNCNTT AAGGCTTGAT 300  
 AAGGTGAATN GNGGTGNGNN NTNTGGGGGG AGN 333

SEQ ID NO:4764

15

SEQUENCE LENGTH:131

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05654

20

SEQUENCE DESCRIPTION:

GATCCTCCAA AATTCAAACA AGGAAAAATC TCTCCAATC TCTCCTTCC TCCATCCCTT 60  
 TTCTTTACTT CTCATCCCAT ATATAATATT ATATAANGCA TACGTAATAA AAGACATTCA 120  
 CTATTATTAA A 131

25

SEQ ID NO:4765

SEQUENCE LENGTH:271

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

30

CLONE:HUMGS05655

SEQUENCE DESCRIPTION:

GATCTCTTTT GCTATGGCTC ACATTATTTT CATAAAGTTG CTGGCCAGCT TTTACCTCTT 60  
 GCATATAATC TGTGAAGAG GAATCTGTTT GCAGAAATTA TTGAGGAGCA TCTGGCAAAC 120  
 35 AGAAGTCAAG AGAACATAGA CCAACTTGCT GCATGAGTAA GGTGGCTTTG NTTGGTGTAC 180  
 AGTATTTCAG AGGACTAGTA TTAANCTTGT GATTNGGTT TTGTTTTTAA GGGGTACANN 240  
 NNGTAAGCCA TTNCTTAAN AACCGTTGAA A 271

40

SEQ ID NO:4766

SEQUENCE LENGTH:87

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05656

45

SEQUENCE DESCRIPTION:

GATCTTTCTC TTGAGTCATT TTATTTTAT CATGGACTAG TCGTGCTCC GTGTCCACCC 60  
 CAATAAAAGG GTCTTTCCTA CTTGAAA 87

50

SEQ ID NO:4767

SEQUENCE LENGTH:293

SEQUENCE TYPE:nucleic acid

55

TOPOLOGY:linear

CLONE:HUMGS05657

SEQUENCE DESCRIPTION:

5 GATCTGGGCA ATTTTGGCCT TGACTCTTTC CTGGCTCCAG AGCTCAAGCT TAGANGCCAG 60  
 CCCTGCTATT TCCAGCCTCC TGAAGGCTCA GCACGGTGAG GCCTGACATC CTGGGGAAGG 120  
 GCAACAGGGA GACCTACAGG ATGNTGGCTG CTTGCAGACT GGTCAATGGG GGATGACGGT 180  
 GGGGAGGTTG NCAGATGTGA GACTTNNGTA GCATTNGTA CACATGGCCC TGTAGTTGTC 240  
 10 CTTTNGAAGA ACATCANTNA AAATATANGG GTNNTTAAAT TNTGGGNAAA AAN 293

SEQ ID NO:4768

SEQUENCE LENGTH:313

SEQUENCE TYPE:nucleic acid

15 TOPOLOGY:linear

CLONE:HUMGS05658

SEQUENCE DESCRIPTION:

20 GATCTTGCTA GGGAAAGCCA CCTTGTATGC CGTGCTGGTC AGTGCCCTCG TGCTGATGGC 60  
 CATGGTCAAG AGAAAGGATT CCAGAGGCTA GCTCCAAAAC CATCCCAGGT CATTCTTCAT 120  
 CCTCACCCAG GATTCTCCTG TACCTGCTCC CAATCTGTGT TCCTAAAAGT GATTCTNACT 180  
 CTGCTTCTCA TCTCCTACTT ACATGAATAC TTNTNTCNGT TTTTNTGTT CCCTGAAGAT 240  
 TGAGCTCCCA ACCCCCAAGT ACGAAATAGG CTAAACCAAT AAAAAANTGT GTGGTTGGGG 300  
 25 CCTGGGGNGC AAA 313

SEQ ID NO:4769

SEQUENCE LENGTH:279

SEQUENCE TYPE:nucleic acid

30 TOPOLOGY:linear

CLONE:HUMGS05659

SEQUENCE DESCRIPTION:

35 GATCCCCTCA TCACCCTGT GCCCACTTCG GAGAACCNT TCCGGGAGAA GAAGTTCTTC 60  
 TGTGCTCTCC TCTGAGCTCC CCTGTCCCTT CTCACAACTN CTCCTTTTC CCTCTCCTGG 120  
 GCCCTTCCTT AGGTCAGTAA TTGTTGTGAG CCCCTTAGGC TCCTTGATC CCATCCCTAA 180  
 CCCTTGCTG ACCATGTGAG GTTATCTGAA GCACAAGNNC CACCCTNANG NNGNNTNTCG 240  
 ACCCGATTTC CTACCACCTT TTTTGGGCCG ANCCNAAGN 279

40 SEQ ID NO:4770

SEQUENCE LENGTH:203

SEQUENCE TYPE:nucleic acid

45 TOPOLOGY:linear

CLONE:HUMGS05660

SEQUENCE DESCRIPTION:

50 GATCCATGTA ATCTGACGTC ATCTTGTCTC GAAGTCTCTT TTTTGGCCC AGGCCTTGAA 60  
 GAATACACTG TGACTTAAGA AGCCTTACCA CGCAGTAACT AAAGCTTTAG GATGACTGTN 120  
 TTCGAGGAGT GCCGTGTGTT GCATGCAGCT ACCCGTAGGA AGACTTCGCG CATATCACTA 180  
 ATAAACCTGA AGTCGTGATG AAA 203

55

SEQ ID NO:4771

SEQUENCE LENGTH:112

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05661

SEQUENCE DESCRIPTION:

GATCGTTGTG CTTTNTTNC TGTGTTGGTT GCCAGTTTAT AGTGCCAACA CGTGGCGCGC 60  
CTTTAATGGC CCGNGTGCAC ACCNAGCACT CTCGGGTGCT CCNATCTCCT TN 112

SEQ ID NO:4772

SEQUENCE LENGTH:291

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05662

SEQUENCE DESCRIPTION:

GATCTGGGAG GTGGAAGCCA GGCCAGAGGA CTTGGGGAAA ATNAGATGGA GGAAGGAAAA 60  
AGGGAGAAGC TGAGCCACAG CTTAACTCCT ACAGAGTGAA ATNAAAACGG GCTGAAAATA 120  
CCACCCAGG AGAGGACCTC GNCCANGCA AGCCAGTGAG CAGCCCTGCC AGACTACTGN 180  
CAGNCTGNGA AACCCAGANG CTGGGTAGTC ATGTGGGGCT TGCCTTCITT TGCCAAAACG 240  
NCTGGGGGAA NCCAAAAATN GGGCCCCACC CTTNNTGTTT CTTTCCTTNG N 291

SEQ ID NO:4773

SEQUENCE LENGTH:133

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05665

SEQUENCE DESCRIPTION:

GATCCAGGC CTNTGGCTAG CAGCACTGAG GACAAGGAAA TGGNTGGTCC CTTTGAGTAG 60  
GTCGTTACAA GGCTCAATGC CTGGTNGTCT TGGAGGGTAC TCGGAAATAA ATTGTAGCAG 120  
CTTTCCTGCC AAA 133

SEQ ID NO:4774

SEQUENCE LENGTH:316

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05667

SEQUENCE DESCRIPTION:

GATCACCCAG CAGGAGTCGT GGCAGAACGG AGCATCAGCC AGACCCTGTT GTGGGCGTTG 60  
TCATCAAGGG AGCTTGAATG GAGGGTCTGG TGTCAGATAC AGCCGACTCC AGCCCCAGCT 120  
CATCCCCAT GATGCTGTGT GACCCACTGG GCACTCTGGT GAGGGAGCTT TCCAGACATC 180  
AACAGCCCAC TCTGCTTCCC TTTCTGAGTC CCCTGTCCAG CACTGCCTAG TGTGGAGGG 240  
TAGACCAAGG CTGTGCATGA TTCACCCCNCT CTTCCATCC TGGAGCTGGC AGTGAATAAA 300  
AGCCCGTATT TACAAA 316

SEQ ID NO:4775

SEQUENCE LENGTH:113

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05668

SEQUENCE DESCRIPTION:

GATCTCCAGA GACCCAAGTT TAGGTTCTCA TAGTGTATTT GAAGTAGTTA TACTCCTGGC 60  
TTAAGTAGTT TAGTGCCTGG GAGAATCCAT TACTGAAAAG CATTAACTT AAA 113

SEQ ID NO:4776

SEQUENCE LENGTH:157

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05669

SEQUENCE DESCRIPTION:

GATCTAACAA AAATGAAACA TGAAATGCAG TAGCAACCAC TAAAAAAAAA AATTCAAGGN 60  
CATCTAACTN TTTCTCTCAC TTTNGCCCTT TGTTATCCT TCCCTGTGAT TAGATAANCA 120  
NAATAAAAN CAAAATGCTG TATTTCTCTN CTTACGN 157

SEQ ID NO:4777

SEQUENCE LENGTH:214

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05671

SEQUENCE DESCRIPTION:

GATCACTTAG AGAAACAGGC CGTTAGGAAT CCATTCTCAC TGTGTTGCT CTAAACAAAA 60  
CAGTGGTAGG TTANTGTGTT CAGAAGTCGC TGTCCCTACT ACTNTTGC GG AAGTATGGAA 120  
GTCACANCTA CACAGNGANT TCTCAGCCTA CAAATTGTGN CTATACATNT CTAAGCCTTG 180  
TTTGCAGNAT AAACAGGGCA TTTNGCAAAC TAAA 214

SEQ ID NO:4778

SEQUENCE LENGTH:141

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05673

SEQUENCE DESCRIPTION:

GATCAGTTTN CAGCAGCAAG TACAAAAGGA GAAGAGGAAC ATCCGTTGAA TNAGTGTGTT 60  
TTGTACATAA CTTCAGATAC TTGTNAACAT GCCTTATATT TGCCAACAA CTGTCAGANT 120  
AAAGAACATT CTAATAATNAA A 141

SEQ ID NO:4779

SEQUENCE LENGTH:154

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05674

SEQUENCE DESCRIPTION:

GATCTTGTGA AAACACNGTN TTNTCGACTA AAAATTCCAC TNTCTTCATC TNGTTGTGAA 60  
 GCTAAAAAGA GGGACTGTTA AATACAATGT ATGATACCAT GGCAAAAATC TTTCTGAAT 120  
 TGTCTTTNGT AAAAGTATTA TTGAATTTN CAAN 154

SEQ ID NO:4780

SEQUENCE LENGTH:236

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05676

SEQUENCE DESCRIPTION:

GATCAAAATA GCTATTGCTA CAACATTTTC GAAAACAAAG TTGGGGCTGT ATTTCTTTAA 60  
 AAAGATAAGC CTCTAAAAAT GCTTGGCAAA AAAAATATAG TGTTAAAAATA GGCCAGTGAT 120  
 ATTAATGAGA AAATGAAAGT ATGTATCAGG ANTAANGTGA TATTGCATAG GNGTATTGTA 180  
 TTTTATGAA TTTNATGCCA GTTGTTTACA TGTACTATAT ATGTNAANTT ANNNNN 236

SEQ ID NO:4781

SEQUENCE LENGTH:168

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05679

SEQUENCE DESCRIPTION:

GATCTCAGTT GCACGTGCAA ACAAATCCAA ATTGGAACAT TCTTAGGAGG TTTTNTTAA 60  
 GGCATGACAG ATGATNTAAA CAAATAAATA GCATGCAACA AAANGTCTTT ATTGNAAGAA 120  
 GTGGAAGTTA TCTTAATGCC ACGGNTCACC ANCAATTNAA AAGTANAN 168

SEQ ID NO:4782

SEQUENCE LENGTH:79

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05680

SEQUENCE DESCRIPTION:

GATCAGTGAA CACTAACATT TTGGGGACAA CTTAGTCAAT TGGTTTTCCT TACAACAAAA 60  
 TAAAGTAAAA TGTAGCAAA 79

SEQ ID NO:4783

SEQUENCE LENGTH:107

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05681

SEQUENCE DESCRIPTION:

GATCACCATT CAATTTGAGT TTCCAGGGGG AAGTGCATGT ATAATGNAAT GATAATGGAC 60  
 TTCAATGANG GATGTCATCA ATNATGNACA TATAGATNGC CTTATAN 107

SEQ ID NO:4784

SEQUENCE LENGTH:319

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05682

SEQUENCE DESCRIPTION:

GATCTAATAA GACACGTAAT AGATTAGAAG TAGGGAAATT AATGAAAAAG CAGAATTAAG 60  
 GATGACTTCT CACTGGCTTG AAATNCTAAA TGGATGACGG TGCTGTTTAG TGAGTTGGGG 120  
 AAGACTGGGC GTGGTGATGG GTGTAGAAAT TGAGAAAGGA AAATCAAGAN TTCACAGAAC 180  
 TTTACAGACA ATGTTAAATA CTTTCCTTGA TAGTGGGTCA GTCATCATTT ATAAGTGCAT 240  
 TTCTAAAAAT NTGCTTAAT TTTNTTTTG AGCTTTGTAT AAGTGAATT TTGTGTGTAC 300  
 TGATTATNTT GCTCAATAN 319

SEQ ID NO:4785

SEQUENCE LENGTH:78

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05683

SEQUENCE DESCRIPTION:

GATCTTTCAT CTGTGATTCT TATAAGAGCT TTGTCTTCAG AAAAATAAAA AATAAAAGGC 60  
 ATTGACTTAA ACAGCAAA 78

SEQ ID NO:4786

SEQUENCE LENGTH:51

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05684

SEQUENCE DESCRIPTION:

GATCAGTTGT AAGTTCATTT CTTTACAAAT AAAAGCCTCT TCCATTTGAA A 51

SEQ ID NO:4787

SEQUENCE LENGTH:288

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05685

SEQUENCE DESCRIPTION:

GATCTTTTCC ATCTGAGGGT ACAGGAAGTA CCAGGACCTG TTTACGTTTT TNAATCCTGC 60  
 AAGCACATTC CAAGACTGGC CTGAACTGC ATGAGCAACA TCACTCGAAA TAATTTTTTT 120  
 TTTCAAANGC ACCTTAACAA CCANTTGCGA TGCTGTCCTG TTCCTTTTTC CTCACACCCT 180  
 TCTNTCCTTT CTCGTCCCA TGTCCACCA NCTCAGTGCT NTGTGCTGTA TGGGTGTGCT 240  
 CTCTGTTNTN GTATACTCAA TATANGTGA ATAACTGGT GTTTTGTN 288

SEQ ID NO:4788

SEQUENCE LENGTH:278

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05686



## SEQUENCE DESCRIPTION:

GATCATGCAT GCAGTCATGT CTCCAGTATT CTGTGAAAAG CCAGGATACG TTAGGATGTG 60  
 AGTTTAGAAA CTGAGTCCAT TCGGTGCATG GAAATNCACC GCGGAGTTAC ACAANGCTCC 120  
 TCACTGTAGT CCAGGCGATT GGTNGGCCGC CACACCCTG CGGGCTTCAC AGGGACGCGT 180  
 GCTTGTNCTC CAAGNCCCGN AACCTTACT GTGCACACAN CATCNNACAC ACCTTTGTTT 240  
 TTGAAATTAA AATGTTNATT AGTTNAAAAA AGGGNGGN 278

SEQ ID NO:4789

SEQUENCE LENGTH:337

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05687

## SEQUENCE DESCRIPTION:

GATCCCGGTG TGTGGCCCAG CTTGTNCAGG CCCTGGNATG CTGCATCTCC AGGCAACTAT 60  
 GCACCTTCCC GGGGAGAGAA CCAGTATGAG AAGTGGGGC AGGGCACACA TTCATCTTTG 120  
 TAGGAAGGTC TGGCCTGGGG TCGGGTGAAG GAGGGCCCAG GTCAGTNCTG GGGTCCCAGT 180  
 GACCTGCTTT GCCATTNTCC TGGTGCCGNT GCTGCTCCCT GTTCTGGAG CTGGATGTTN 240  
 CCNAGCTGGC AGTTGAGCTG CCTGAGCCAA TNTAGTCTAG NCTTTGGTAA CTTGNGTGAA 300  
 CCATAATAAN GGGGAACCAT TNTNGCCCTT GTGNAAA 337

SEQ ID NO:4790

SEQUENCE LENGTH:251

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05688

## SEQUENCE DESCRIPTION:

GATCACAAGG CTGCCTGCCT CAGTCTTGGA GTCCTGTTGG GTGAATNAGG CAGATGGGAA 60  
 ANAGCCTCAC CAGCAGCTGC TTTTGAGCA GGGGTCCAAG GAAGAGAGGG TGGCCTCGAC 120  
 ATCAAAGTGC CTGGATTTT CTACCACCCT GTTACATCAT AACAATTCT GAAACACACA 180  
 CCAGCCCTGA GTTCTGGGCT CATTGAAGC CTGGAATAGC AATAAATCTT TTTAACTTGC 240  
 GGACAGTTAA A 251

SEQ ID NO:4791

SEQUENCE LENGTH:316

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05689

## SEQUENCE DESCRIPTION:

GATCGAAGAT GTACAATGTT AAATGTNCAT ACCAGTTAAA CTGCACCTTC CCAAGGGGNC 60  
 AGCTGGNATC TACTTGAAAT GGGNATCAAG AGACCACCAA ATGTTTACAG TTTCTGTGGC 120  
 CCGTTTAAAGT GTAAAATGCA GAAGTGGCTC TGTCCCCCA GAGTTAAGGN TTTGCTACAC 180  
 TGGTCCTCTG GAAGCATTTA NGTAGAAGAA AAGGCTTATA GTCAGNNTCA CTTTATAGTA 240  
 TCGTCTNCTG GTCCTTGGNC TNTTCTGGTT CTGTNANTGC TTGTAACCAA TGANTGATGG 300  
 TGTGCCAAT CTNAGN 316

SEQ ID NO:4792  
SEQUENCE LENGTH:346  
SEQUENCE TYPE:nucleic acid

5 TOPOLOGY:linear

CLONE:HUMGS05690

SEQUENCE DESCRIPTION:

10 GATCAGTCCT GTCATCCAGC TGCAGCCAC CTCACACCC ATGCGGGTCG CACTNGCTGG 60  
CACATTCCAC TACTACAGCT GCGAGAGAGC CAAAAAGGCC ATGGGCTACC AGCCACTAGT 120  
GACCATGGAT GATGCTATGG AGAGGACCGT GCAGAGCTTT NGCCACCTGC GGAGGGTCAA 180  
GTGAGGGNCA CTNGNGGCTG GGCTCTCTNG ACACGTTGCT CAGCCAGTCA CTNCTTCCCC 240  
TGNTGGATTG ATGAGNTAAC ATCCTTTNGA ATGGAGTTN GCTCTTTGCC TGTGACTCCT 300  
TCTGCTAGGC AGNGGAGCGC ACCNTACTNT TTNCGTNGCG GTGNGN 346

15 SEQ ID NO:4793

SEQUENCE LENGTH:187

SEQUENCE TYPE:nucleic acid

20 TOPOLOGY:linear

CLONE:HUMGS05692

SEQUENCE DESCRIPTION:

25 GATCCCAGGG ACTCATCCTG TGACTTTGTA ACCACACTCA TTCCTTTCAA ACACAGAGGA 60  
GGAATTATTG CTTCACTGA CTTTATTCAA ATCTAGTTAT GTATTGGCCT AAATTATTG 120  
TGCAAAATTT GAANNNNNT TTNATTTAAA TATTAGAAAT AGCACAAAGT CATGGNGTTT 180  
TTAANAN 187

30 SEQ ID NO:4794

SEQUENCE LENGTH:228

SEQUENCE TYPE:nucleic acid

35 TOPOLOGY:linear

CLONE:HUMGS05693

SEQUENCE DESCRIPTION:

40 GATCTCAAGA GCCCTGTCAG TAGAGTAGAA GTCTCTTCCA GTTGCTTTG CCCTTCTTTC 60  
TACCCTGCTG GGGAAAGTAC AACCTGAATA CCCTTTTCTN ACCAAAGAGA AGCAAAATCT 120  
ACCAGGTGAG AATAGTGCCA CTAACGGTTG AGTTTGGACT GCTTGGAAGT GGAATCCTTT 180  
CAGCAAGACT TCTCTTTGCC TCAAATAAAA AGTGCTTTTG TGAGCAAA 228

45 SEQ ID NO:4795

SEQUENCE LENGTH:230

SEQUENCE TYPE:nucleic acid

50 TOPOLOGY:linear

CLONE:HUMGS05694

SEQUENCE DESCRIPTION:

55 GATCTGCTTA AAGTTTAAAC TTTTATACCT ATCTGAGTGA ATTACAGACA ACCTATCATT 60  
NATNCTGCTN CGAGGGTCCC CAGGGCCCTT GTACAACCGA CAGNTCTTAC TTTTAAATGC 120  
AATCTCTTGT CTACATACAT NATTTTCTTA ATNGTTAGC TATTATAGA AAGCTGCAAT 180  
AGAACTGTNT CAACTGTATA ACTATTACN ATTCANAATA NAANTATTN 230

SEQ ID NO:4796

SEQUENCE LENGTH:367

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05695

SEQUENCE DESCRIPTION:

GATCTCATTT GCTGAATGAT TGATTAAAGA GTAAAATTNG CCACTGCGTG CTTTTGTAT 60  
 AGTAACCGGT TTTGTTGCAC TNGTCTGTGG CTGAAACACT TACCTGCAGT GGAANGCCGA 120  
 GCAAGGAGGA GGTAAACATT GGAGATGTTT GTGAAAATAT TACTCTTGCT GTGAGGTTTT 180  
 AGTTTGTTTT GAATGAGAAA GGGGCTAAGT AACTTAATCC ATCTCAATGT AGTGTTTTAA 240  
 TAAAAANGGN GCCTAATATT TGAAATGGGG TCTCAGGNCA TGNTCTACAA ATNTGGGGNA 300  
 NCTATTTTNN ATGCCCCGTG TAATTTTNCA CCATTTTGNN NATGAGTTNA TTGTAGGGGT 360  
 CANNATN 367

SEQ ID NO:4797

SEQUENCE LENGTH:88

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05696

SEQUENCE DESCRIPTION:

GATCTTTTCT CAGAGCGTCT CCATGCTATG GTTGCAATTC CGTTTTCTAT GAATNAATTT 60  
 GCATTCAATA AACAACCAGA CTCAGAAA 88

SEQ ID NO:4798

SEQUENCE LENGTH:239

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05697

SEQUENCE DESCRIPTION:

GATCACAAGT GCAGCATTCC TTAATTCCTT CTGCTATATG TCACACAGTT GTTATTTGGA 60  
 GAACCAAGTA TGTATTGCAT GAAAACATTA TGACTTTTTT CTCTTAGTTT AAATAAACTC 120  
 CAAGGTAAGT GGACTTCTAA AGCACCTTTC TGTTCGCTG ATATCTACTT TAGCAATAAT 180  
 TTTTTTTACA ACCCTCTGAC TCAACAAAGT AAATAAAAGT ATATTTTATC ACTATTAAA 239

SEQ ID NO:4799

SEQUENCE LENGTH:148

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05701

SEQUENCE DESCRIPTION:

GATCTGGCCT TATGCCCAGG CCTGGGCCCT CAGAAAGCCC GGAGGCTGTT TGATGTCCTG 60  
 CACGAGCCCT TCTTGAAAGT ACCCTGATGA CCCCAGCTGN CAAGGAAACC CCCAGTGTA 120  
 TANTAAATCG TCCTCCCAGG CCAGGAAA 148

SEQ ID NO:4800

SEQUENCE LENGTH:109

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05704

SEQUENCE DESCRIPTION:

GATCCTCAAC AGACACCTTC CTTGACTGAA AGTTTAAATC GTGATGCAGA GNCAGTCAGT 60  
NATNTNCCGC CATCCACAGG AAATTCAGCA TCTTTATCTC TNCCACTTN 109

SEQ ID NO:4801

SEQUENCE LENGTH:147

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05707

SEQUENCE DESCRIPTION:

GATCAATTCA ATTAGATTAA AATNAAGAAC CTTGGGGCAG AGTTTGGGTT TTGTAAAATN 60  
AAAAGAGTTC TGGAGTTAAG CATCGTGAAC ATGCTTAACA CTACTGAACT GTACACTCAT 120  
TTTATAATAA AACTATTAAA TTGTAAA 147

SEQ ID NO:4802

SEQUENCE LENGTH:295

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05708

SEQUENCE DESCRIPTION:

GATCTAATTT AAAATTCATT GGATTGAAAT NTATTGAATA TAATTCANCT TTTGTAACTA 60  
GGTAGACTTT NCTNATAGTT TAGTTTTAAT ATAGTTTAGG GTATTACTGG CTTTCCCCCA 120  
GGTGACACAC TAAGGNCITGT TTACATGGCA ATTCCAGCAG CAACAGGNGG CTGGAATTNA 180  
GACAAGGAAA GCTCATTTGT TTCTTTTATG AAGGTAAAG AAGTCTACAG CTTGGGCTGG 240  
CCGGTATTTA TTNATTCTGT GGCCAGAGGA TTTTAAATTT NNCNCNAATN TTNTN 295

SEQ ID NO:4803

SEQUENCE LENGTH:52

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05709

SEQUENCE DESCRIPTION:

GATCATGCCA CTGTCCTCCA GCGTGGCAAC AGAGTGAGAT TCTGTCTCCA AA 52

SEQ ID NO:4804

SEQUENCE LENGTH:374

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05710

SEQUENCE DESCRIPTION:

GATCAGATGG GGACACACAA CCCCTGGATA TGTTCATTG TCAGATTTG TGCTGNNATT 60  
 TTAAGAATGG AATGGTGGGT ATCTTTCCTT TTTTAAATG TATCTTAACT GTTGCCTGTC 120  
 AGTGNNNACA AACTAGTGCG TTGACGGCAC CGTGTCCAAG TTTTAGAAC CCTTGTTAGC 180  
 CAGACCGAGG TGTCTGGTC ACCGTTTCAC CATCATGCTT TGATGTTCCC CTGTCTTTCC 240  
 CTCTTCTGCT CTCAAGAGCA AAGGTTAATT TAAGGACAAA GATGAAGTCA CTGTAAACTA 300  
 ATCTGTCATN GTTTTACCT NCCTTTTCTT NTTNAGNGC AGAGGTAAA AGTAAGTATN 360  
 AAGCACCCGT GAAA 374

SEQ ID NO:4805  
 SEQUENCE LENGTH:123  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear

CLONE:HUMGS05711

SEQUENCE DESCRIPTION:

GATCTGACTG TGAAACATC CTCTCACTTG CATTCTTTTA ACTTAAACT ATTTAAGAAC 60  
 TGATGTTCCG ATTATTGTAT ATATTNNCT AAAANCCAAA TAAAGCTACC TATGAAAATG 120  
 AAA 123

SEQ ID NO:4806  
 SEQUENCE LENGTH:299  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05714

SEQUENCE DESCRIPTION:

GATCAAACAG GAAATTGAAA GCCACTGNAA CTATGCAGCA TTTCAGTTT CATTAAACA 60  
 CTTAGTTCAG AAACCTTAAA GGATTGANT ATTTCAAAT GCACACGTCA CTCCAGCATC 120  
 TCTGTAANAT AATTGGAATG AANATACTT TTGCACTTAA ACACGTGACA TGCCGTNCTT 180  
 TGCGGTTNGT CTGCATCTTG AACTTTAATA CCAANTTNNT TTTGCATGCT TTTGTTTCTT 240  
 ACGNGATAAT GGCATGGTTT CATATGTNAC TACTTTGGAC CAGTGTTC ANNATGGNN 299

SEQ ID NO:4807  
 SEQUENCE LENGTH:204  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05715

SEQUENCE DESCRIPTION:

GATCTGGACA AATGACAGTA ACTGTTTCTA ACCTTGATTT TCTCATCTNT AAGATGCCAA 60  
 TTGTAATCC TAAGGNTACT GAGGATTTT TAAATGCGT GTACAGTTCC TGACCAGTGG 120  
 TTTGTGCCTA ATAACNTATT ACAAATNATT ACCNAGTAAA ANCCTTGCGC CANGTGTGAN 180  
 AACGTAAAGC TANTTAATCC ATNN 204

SEQ ID NO:4808  
 SEQUENCE LENGTH:348  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear

# EP 0 679 716 A1

CLONE:HUMGS05716

SEQUENCE DESCRIPTION:

5 GATCAAGCGA CCTTGAGAGC AGAGNACAAA TCCCAGTGTT GCTGATATAT GGCTTCTNCT 60  
TCTCTTGTTGT GTGCCTCAGC TCTGAAGNAG TTCCTGAGAA TGGGTTACAG ATGTCATGTT 120  
AGCTGGGAGT CTTCCACAT GTGGCACTTC AAAAGGCAGC ACCACTGGGC GCCTGCACTT 180  
ATTTGAAAAAT GGNACCTTTGG GNGAAGTATC CCTGCTAGTG GCTCTGTAAC TTAACAGATG 240  
TCANTTAGGC TTTTGTCAAT GTTGCCATCA TATNNANGCT AATGTNTACA TCCTTTTAAA 300  
10 CANNTTNGT ATGACAATTN CCTCAGGATT TNGGGTAAGN CTTCCCAN 348

SEQ ID NO:4809

SEQUENCE LENGTH:287

SEQUENCE TYPE:nucleic acid

15 TOPOLOGY:linear

CLONE:HUMGS05718

SEQUENCE DESCRIPTION:

20 GATCCTCCTG CAGACCACGC CCGTCCTGCC TGTGGCGCCG TCTCCAGGGG CTGCTTCCTC 60  
CTGGAATTG ACGAGGGGTG TCTTGGGCAG AGCTGGCTCT GAGCGCCTCC ATCCAAGGCC 120  
AGGTTCTCCG TTAGCTCCTA TGGCCCCACC CTGGGCCCTG GGCTGGAATC AGGAATATTT 180  
TCCAAAGAGT GATAGTCTTT TGCTTTTGGC AAAACTCTAC TTAATCCAAT GGGTTTTTCC 240  
CTGTACAGTA GATTTTCCAA ATGTAATAAA CTTTANTATA NAGTAAA 287

25 SEQ ID NO:4810

SEQUENCE LENGTH:342

SEQUENCE TYPE:nucleic acid

30 TOPOLOGY:linear

CLONE:HUMGS05719

SEQUENCE DESCRIPTION:

35 GATCACCACC CCGAGCCCTC TNATCCTCTA TGGNTTCACT CCCATCATGA TTTGGAATTA 60  
TTTATTTGTG AACTTGATTA GCCGAGATTG TAAATNACAT GAGGTGAGG ACTGGACTGG 120  
GTATGTTTTT TTCTCTGTTG CTTTCTGGC ATGAAGTACA GTAAATACAG CACCTGATAC 180  
ATTATACATG GCCACAAATA TTTGTTGAAT GAATGANTAA AAGCACATTG GGTCTGACC 240  
ATTCACTGTC CCTGNAANGA ATGCAGTTTT TCAAACCTGT GCNTCACCAT CCATTAGCGG 300  
GNGTGTGAAT CCAATTTAGG TNGGTGATGT CTAGCATTNN AN 342

40 SEQ ID NO:4811

SEQUENCE LENGTH:299

SEQUENCE TYPE:nucleic acid

45 TOPOLOGY:linear

CLONE:HUMGS05720

SEQUENCE DESCRIPTION:

50 GATCATTAAC CAGAGTACCT CTACTCTTAG CAAACTCTAG TTTATGACAA GTATTTAAAA 60  
TATTTAAAC AAGCTTATGC AGTTCTTAAG GNCGNAGGTA AATGAGATGT ANCTTAAAA 120  
TAGTATTGGG AAAATGTTGA TAGTTAACAT TAGTGGATTT AGACTAGCCA AATGACATAG 180  
TAGGCTCTGA AACATCTTGT CAAGTNTATG TTTTTGTGC ATGANTTTTT GCTGGAAAGC 240  
TGCTTTTCTC TGAAAAACAC ANCGTTCTTA GACTGNNANG CCANTTATAA CNTAANN CN 299

55

SEQ ID NO:4812

SEQUENCE LENGTH:310

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05721

SEQUENCE DESCRIPTION:

GATCTTNATG CCCAACATTG GTTATGGAAG CAACAAAAA ACAAAGCACA TGCTGCCCAG 60  
 TGGCTTCCGG AAGTNCCTGG TCCACAACGT CAAGGAGCTG GAAGTGCTGC TGATGTGCAA 120  
 CAAATCTTAC TGTGCCGAGA TTGCTCACAA TTTNNGNTC CAAGANCCGC AAAGCCATCG 180  
 TGGAAAGAGC TGCCCAACTG GCCATCAGAG TCACCAACCC CAATGCCAGG CTGCGCAGTG 240  
 AAGAAAATGA GTAGGCAGCT CATGTGCACG TTTTCTGTTT AANTAANTGT AAAANCTGCC 300  
 ANANAAANTN 310

SEQ ID NO:4813

SEQUENCE LENGTH:63

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05722

SEQUENCE DESCRIPTION:

GATCCCTTTT CTTTGTATGG ACCAGAAATN ATGGGTTGTA CAGGGTGCCA GATAGATTGG 60  
 AAA 63

SEQ ID NO:4814

SEQUENCE LENGTH:127

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05723

SEQUENCE DESCRIPTION:

GATCCCAAGT CTCTACTGGG GGATGAGAGA AAGGCATTTT ATAGCCTGGG CATAAGTGAA 60  
 ATCAGCAGAG CTCTGGGTGG ATGTGTAGAA GGCACCTCAA AATGCATAAN CCTGTTACAA 120  
 TGTAAAA 127

SEQ ID NO:4815

SEQUENCE LENGTH:350

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05724

SEQUENCE DESCRIPTION:

GATCGAATAC AGATGACCCT GCTGTCGTGT CTCATTGT AAAATNCTCC TACAAATGGA 60  
 GACATTGAAG GATTATGTGT ATGGAAATNT TTACAAAATT CCTTTCTGTA CCTATTCTGT 120  
 AGATGCCTGT ATAATCGGNC TGGATGTACA GCTATAAATG TGTGTGAGA GCAAGAGAGA 180  
 GAGAATGGGT AGAGCCTGCT GTACCTTTT CCTTTTAAAT TCTTCGAGTT GGTAAATGAG 240  
 TAAGATATTG GAAACCTTAA TGNAAAGCTG CTGTTTCATGN TTTGTGTGTA TAGTGAGCTG 300  
 CCTGTAGTAT TTNCTATTG TCTGNTAAAA AAAGNAAANC CTGTAACACN 350

SEQ ID NO:4816

SEQUENCE LENGTH:178

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05725

SEQUENCE DESCRIPTION:

GATCTTGAAC AAAGNCACTT AGTTNCCCTG GGCCTTGGTG TCTTTCGTCT ATAAATATT 60  
 GTACCAGATT ATCTCTGAAA TCACTNCAAG GTTAAATATA TATANTTATC AATATTTTAA 120  
 AATTCAAGCA ATATTCACCT TAGANATTAT TATAACATTC TATANTNGTN GGGGGGGN 178

SEQ ID NO:4817

SEQUENCE LENGTH:123

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05726

SEQUENCE DESCRIPTION:

GATCGAATCG GGACATNATG GGAGCTGACA AATTTATATT CTNTTCAAT NATTTAATC 60  
 CCACTTCACT GTGAGGGGAA GGCCTTTTCA CGGGAAGTCT CCAAATATTA TTCAAGTGCC 120  
 AAA 123

SEQ ID NO:4818

SEQUENCE LENGTH:61

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05727

SEQUENCE DESCRIPTION:

GATCCCAAAT TTGTCCATAG CTGAAGTCCA CCATAAAGTG GATTACTTT TTTCTTTAA 60  
 A 61

SEQ ID NO:4819

SEQUENCE LENGTH:292

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05729

SEQUENCE DESCRIPTION:

GATCTATAGA ATTAGATTTN NTTATATCTA AAGAAATATA TATAAATACA TAAACGTAGG 60  
 TATGTATAGC ATGANCAGAA TACAGTGCTA TTTGACCATT GTCACAAGAC TTATTATATA 120  
 AACCTCCTCA AGCTCTTGCC AATATCTTAG TTAAGNTTGC ATCTAAGGTG GCGGNGGAT 180  
 GNNGATTGAG GCACTGTCAG GTCATGNTTG ATTACCTGGG TGACAANATT ATGTTTACAC 240  
 CAAACCCCCA TGNCACACAG TTTACCCATG TGACANNACN TNCACATGTC CN 292

SEQ ID NO:4820

SEQUENCE LENGTH:61

SEQUENCE TYPE:nucleic acid



TOPOLOGY:linear

CLONE:HUMGS05730

SEQUENCE DESCRIPTION:

5 GATCCCCCAT ATACTCTGCT ACAGCTCCTA TCATGAAAAA TAAATGTTT GTCTTTGCAA 60  
A 61

SEQ ID NO:4821

SEQUENCE LENGTH:140

10 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05731

SEQUENCE DESCRIPTION:

15 GATCCGNTGG GGTGAAAGCA GCCAGCTCAT CCCAGTAACT CACAGGACAC AGCCATCCAG 60  
CGGCATCTTT CCTGTGCGAA TGATACTGTA ATNACCTTCC AAAGTNAAGA GTAGCACATT 120  
AAAGTNATTT TATTGTTAAA 140

SEQ ID NO:4822

SEQUENCE LENGTH:309

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05732

SEQUENCE DESCRIPTION:

20 GATCTCAATG CTGTCTGGGG ACCCTAAGAG TTTNCTNACC TGTNCAGTCT CATCTAACCT 60  
TCCAATGTCT GATGTTCTG CCAAATTCCT GCCTGATTCT GGGTCCGTCC TGACCTCCAA 120  
AGGTCAGCTT GGTGCTTGAG GTCTCCCTGC TCTTGGTGGC AGTGGTAGCA GCAACAGCAG 180  
30 CAGCAGCAGC AGCAGCAGCA GCAGCGNCCT CTCCACTTTN CCTTNGCCCN TCTNCTGGGT 240  
AGAGAGGCAC TTTCAGGGAC TTTCTCCAG GNTGGNTCNT CAATATGGGA ATGNGCTNTG 300  
NAAGGNTTN 309

SEQ ID NO:4823

SEQUENCE LENGTH:109

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05733

SEQUENCE DESCRIPTION:

35 GATCCTCCTG GCGGCAGTAG CCTTGACAAG GGCCACCTCT TCACAGGATG CAGTCTGTCT 60  
40 GTGCACCAAA CTCTTCACCA AATAGAACAC TTGTGTCTCT CTGTGGAAA 109

SEQ ID NO:4824

SEQUENCE LENGTH:233

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05734

SEQUENCE DESCRIPTION:

50 GATCCATTG GNAGGAAATG AGAGGGCTGT NATCAGCTCT NATTAAGAAA GGAGATTCT 60

55

TCATGCTTTC GATTCTGCAT GGGGTACAGC CAGTCACCTC ACCAGAGANT GACGGCTGGA 120  
 GAAGTNAACT CTGTAATACC ATAAATAAGA GTGCTTGTA TAAAAGNCTG TGCACANGGA 180  
 TTAATATTTC CCNTCTTAAG TATCAAACGA CCTCTGGANC AAATTNTACC NTN 233

5

SEQ ID NO:4825

SEQUENCE LENGTH:102

SEQUENCE TYPE:nucleic acid

10

TOPOLOGY:linear

CLONE:HUMGS05735

SEQUENCE DESCRIPTION:

GATCTGACGT TTTCTACGTA GCTTTTGTAT TTNTTTTTTT TTTAAANTTG AAGGACCACT 60

15

GATGAAGCCC TNCCANACCC CTCCGGGTC TAANAAAACG TN 102

SEQ ID NO:4826

SEQUENCE LENGTH:277

SEQUENCE TYPE:nucleic acid

20

TOPOLOGY:linear

CLONE:HUMGS05736

SEQUENCE DESCRIPTION:

GATCAAGAAA TNTCTCTNCT CCTACATCCA GCTCCTCTAG GGGCAGCCTC CGTCATCCAT 60

25

GCCCTCCCAG GACCTCCAC TCACTGCTGT GAGTGCGCCT CACCAGAACC AGTTAAGAGA 120

CAACTATCAA TTNNGGGGAC CCAAATTATA AGGGCCCTGN CCTGTACTGA AGNAAAGGGG 180

NGCACAAGGC CTTAATGGAC ATTGNCTTGT GAAAACGCAN ACATGAATAT GGTGGAGAG 240

CNTGGCTTAG GAGGGTGTC TGGGNAGNA GNGGCTN 277

30

SEQ ID NO:4827

SEQUENCE LENGTH:98

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

35

CLONE:HUMGS05738

SEQUENCE DESCRIPTION:

GATCCCTCT CCTGCCAAG CACTTCACAG CTGGACCCTG CTTACCCTC ACCCCCCTCC 60

TGGCAATCAA TACAGCTTCA TTATCTGAGT TGCATAAA 98

40

SEQ ID NO:4828

SEQUENCE LENGTH:81

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

45

CLONE:HUMGS05741

SEQUENCE DESCRIPTION:

GATCTGGGAT TTTNTTTTA TTTTGAAATG GGAGCTTTT TGTTTACAAG TTCATTAAAA 60

ACTAAAACT GTTCTGTAA A 81

50

SEQ ID NO:4829

SEQUENCE LENGTH:234

55

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05742

SEQUENCE DESCRIPTION:

GATCGATTTC TTTCCTCCAG GTAGAGTTTT CTTTGCTTAT GTTGAATTCC ATTGCCTCTT 60  
 TTCTCATCAC AGAAGTGATG TTGGAATCGT TTCTTTTGTT TGTCTGATTT ATGGTTTTTT 120  
 TTAAGTATAA ACAAAGTTT TTAATTAGCA TTCTGAAAGA NGGAAAGTAA AATGTACANG 180  
 TTTANTAAAA NGGGGCCTTC CCCTTTAGAC TAANTTCAG CATGTGCTTT CAAA 234

SEQ ID NO:4830

SEQUENCE LENGTH:130

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05743

SEQUENCE DESCRIPTION:

GATCCACCCA CCTCAGCCTC CCAAAGTNCT GGGATTACAG NCATGAGCCA CCATGCTCAG 60  
 NCGTGTGTGT NTGTGTGTAT TATTTATATG TATATGCATA CTATATACAT NTATATATAC 120  
 ACTATATAAA 130

SEQ ID NO:4831

SEQUENCE LENGTH:103

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05747

SEQUENCE DESCRIPTION:

GATCTTTAAT CAAGCACTAT GTTAATACTG TAATATCAGA ATACTATGTT GCATTATTTA 60  
 AAATGTTCAA ATTGAATAGN TTAANAANGTT TTTAAATNCT AAA 103

SEQ ID NO:4832

SEQUENCE LENGTH:325

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05748

SEQUENCE DESCRIPTION:

GATCCTTGGT GCTGTGTGCC CCACTCCAGT CTGGGGACCC CACTTCANAA GGTAGGGGCC 60  
 GTGTCCCGCG GTGCTGACTG AGGCCTGCTT CCCCTCCCC CTNCTGCTGT GCTGGAATTC 120  
 CACAGGGACC AGGGCCACCG CAGNGGACTG TNCAGAAGA CTTGATTTT CCGTCCCTTT 180  
 TTCTCCACAC TCCACTGACA AACGTCCCA GCGGTTTCCA CTTGTGGGCT TNAGGTGTTT 240  
 TCAAGCACAA CCNACCACAA CAAGCAAGTG NATTTAAGG GGGTTGTGCT TTTTGTITTN 300  
 GTGCTAACGT CTNACTAATT TTAAN 325

SEQ ID NO:4833

SEQUENCE LENGTH:212

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05749

SEQUENCE DESCRIPTION:

5 GATCTGAAGA GAAGCCAGAG TATAATTTNC TACTATTTTC AATACAAAGN TGTGTTTTCA 60  
 TTACAATTAG NGGAATATAG GCTTCTGTGA GCTAGCCTGG AAGCAAACAT AATCATTATT 120  
 GTNCATTGTT TCTGTGNGAN ACTGTAATGC TGTTCCTAAA TATTGACCTA ACANTAAACT 180  
 CTGNGGAATT CATGCTTGTN ACTGGNTGGA AN 212

10 SEQ ID NO:4834

SEQUENCE LENGTH:284

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

15 CLONE:HUMGS05751

SEQUENCE DESCRIPTION:

20 GATCTGGCCT TATGCCAGG CCTGGGCCCT CAGAAAGTAA GAGCTCTGGG AAAGAACCCA 60  
 AGGAGTTGGG GGAAGGAGAG AGCCCCAAAT AAACACAACC TGAGACCCA AAGTTTAAAG 120  
 GTGNAANG NACCAAAGAC CAGNCACAGT GGCTTCCGCC TGTAAATCCA NCATTTGGG 180  
 NGGCCAAGGC GGGAGGACTG CTTGAGCCA GAAGTTGGNG ACCATGCCTG GGCANCGTGG 240  
 NCACCTCATT TTTACTACAA ATNAAANAAN CTTCGCTGNG TAAA 284

25 SEQ ID NO:4835

SEQUENCE LENGTH:60

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

30 CLONE:HUMGS05752

SEQUENCE DESCRIPTION:

GATCCTACTG ATGAAATTCC CACTAAAAAG TCAAAGAAGC ATAAAAAGCA CAAAAACAAA 60

35 SEQ ID NO:4836

SEQUENCE LENGTH:144

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05754

SEQUENCE DESCRIPTION:

40 GATCAAAAAA TTGAATGATA AATATGAATG GCTTTTCAAT TCTGTGGACT TTGTACCATT 60  
 TGGCTTCACC TTGTACTGCA AGATGAATTT GTAAACAAAA CAAAATTGGN CTGTCTGGAA 120  
 AGCTAAAGTN CTGAAATATG GAAA 144

45 SEQ ID NO:4837

SEQUENCE LENGTH:138

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

50 CLONE:HUMGS05755

SEQUENCE DESCRIPTION:

TTTCAAAGGC CAGGACCTG GGGCCCTCA ACTGCAGTCA GAGAGCAAAG CCCTTAATAA 120

55

ATATTNACA TCCTTAAA

138

SEQ ID NO:4838

SEQUENCE LENGTH:84

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05756

SEQUENCE DESCRIPTION:

GATCTTGTTT ACATCTTGCT CACTGCTATA TTCTCATTGC TGAGCACACA GTTGCACTC 60  
 AATAAATTTT GAATGAACTC CAAA 84

SEQ ID NO:4839

SEQUENCE LENGTH:114

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05757

SEQUENCE DESCRIPTION:

GATCACCTNA TGGATGTCGC AATAATACAA ACCAGTGTAC CNCTGACCTN NTCATCAAGA 60  
 GAGCTGGGGT GCTTTGAAGA TAATCCCTAC CCCNCTCCCC CAAATGCAGC TGAN 114

SEQ ID NO:4840

SEQUENCE LENGTH:323

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05758

SEQUENCE DESCRIPTION:

GATCTGCACT ATNAACTTTG TGAAGAGTTT CTCCTAAAAA CTTTAAGTAA AATGTTAATG 60  
 GTAGCTTTGA TAACATCAAA TTCTAAGGGA GAAAAAACA ATATTAAACC GCCCAAGCAG 120  
 TGTGCCCTAG CAGAGGAAAA TGCAACATCT CGCAAGCGCT GCTGTAACGC CTTCAAGGAGT 180  
 CACTGATTCA GCACTAGTTT CCGGCTGTGA AACTCATCT TTCATTTTIN CCGTGGNTNG 240  
 GCGCTTTTNT TANTNGTNGT CCTAATGANA TTTCTGNCAT TGTCATATAC AANCNGNTGAA 300  
 TATCATTAAA ANTTTTTNAN TNN 323

SEQ ID NO:4841

SEQUENCE LENGTH:121

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05759

SEQUENCE DESCRIPTION:

GATCAAAAAA ACGTTCTTTG AAGAGCTGGC AGTAGAAGAT AAACAGGCTG GGGAAGAAGA 60  
 GAAAGTNCTC AAGGNGANGG AGCAGCAGCA GCAGCAACAG CAACAGCAGC AGCAANANAN 120  
 N 121

SEQ ID NO:4842

SEQUENCE LENGTH:351

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05763

SEQUENCE DESCRIPTION:

GATCTTCACC AGCTGCTCGT GGTGGCTCGG TGTCTGTCTC TCAGTGCTGG TCAGACAACG 60  
 CTGTCAAGAG ANCGATGGCT GAGAGCAAAG CAGCTAGAGT CTTTAAGAAG AACGAGGCTT 120  
 CAGCAGCAAA AATGTGTGAA TGGAAATNAA CTTTAAAGAT GTAATACCTA TGAAGAGTAA 180  
 TGGGCAAACT GTAGCCACAT AATTGTAAAA TTCAGATATT CATTATACC ACATTGTTTT 240  
 ATAGGTAATT TCTATCACA ACCAGTGACA TTCCTGAAA TCANGCCTGG TAACACCTGA 300  
 TGTTTATATG ATATTCAGTA AGGACTTTTA CCTTACTGAT TTCATGGNGN N 351

SEQ ID NO:4843

SEQUENCE LENGTH:71

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05765

SEQUENCE DESCRIPTION:

GATCTGAATT TCCCATGCT TCCTGGTTTT NATATGTTT TTGACAAATA AAGCTGATT 60  
 AAATCTCTAA A 71

SEQ ID NO:4844

SEQUENCE LENGTH:111

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05767

SEQUENCE DESCRIPTION:

GATCTTTTC TTTATCTCCC TTCCCTTCC TAAGTCCCAT TTCTGGTCA TAAATATTGC 60  
 ATTATTCACA CTTTCAAAC GTGTATTTTC TTACAATAAA AAATGATGAA A 111

SEQ ID NO:4845

SEQUENCE LENGTH:202

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05768

SEQUENCE DESCRIPTION:

GATCTCACCA CCCACCTGGC CTCGCAGGGC GTTCATCTCC TCCTCGTGGT TCTTCTTCAG 60  
 GTAGGCCAGC TCCTCCTTGA GGTTCCTCAAT CTGCATCTCC AGGTCGGCTC TGGCCAGGGT 120  
 CAGCTCATCC AGCACCTGC TTCAGTCCCT TCCCATGCT TCCTGCCTG ATGACAATAA 180  
 AGCTTGTTGA CTCAGCTATA AA 202

SEQ ID NO:4846

SEQUENCE LENGTH:262

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05769

## SEQUENCE DESCRIPTION:

GATCANAACC CTAGCGCCTT TGGTCCTAAG AATGGNAGGC TGCCTTCENT CCCAATCTCC 60  
 CTGCCAGGGC CCACAGCGTG GCCCTAGCCC TCCCCTCCCC GGAATGTAGA ACGGGGACCC 120  
 TCGCAGGGTT GGGGCGGGGG CTGATACTCC TNGGNCCCTC CCTACCCTGC CCTGTGTGTT 180  
 GGCTTTNTGG CCGTCCAAGT GCCAATTGGG TTTTNGCCCA AATAAGGGCT GGTATTTNTN 240  
 CTNTGTNCTT GGAGGTGNGN TN 262

SEQ ID NO:4847

SEQUENCE LENGTH:250

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05770

## SEQUENCE DESCRIPTION:

GATCTGTATG TNAGGCACCC ATAACAGTAG TTTCCCTGT NAGTCGTCTT CACACATGCT 60  
 GTTTTCTCTG CCTGGCTCTC TCTTCCCCTC CTTACCTGGC CAGTCCTGTT TATCATCAGG 120  
 CCTGTNTTG GATATNACGT CCTCTGGGAA GTCTTCTGGG NCCCTCTAAC CTAGGACCCT 180  
 CATTACGGN TCTCATAGNA CAGTCTACTG NTTTGTACGG AATTCTAAGT ATTCNNGTG 240  
 GNACTNAATN 250

SEQ ID NO:4848

SEQUENCE LENGTH:227

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05772

## SEQUENCE DESCRIPTION:

GATCATTCTT CAATTAGGAC ACAAACCAGA CAGGTTTAAT AGCGAATCTA ATTTTNAATT 60  
 CTGACCATGG ATACCCATCA CTTTGGCATT CAGTGCTACA TGTGTATTN ATATAAAANT 120  
 CCCATTTCTT GANGATAAAA AAATTGTNAT TCAAATTGTT ATGCACAGAA TGTTTTTGGT 180  
 AATATTAATT TCCACTAAAA ANTAAANTGT NTTTAAAGG ANNGAN 227

SEQ ID NO:4849

SEQUENCE LENGTH:231

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05773

## SEQUENCE DESCRIPTION:

GATCTAAATA TAAGAGCAAA AACCATAAAG CATCTAAAAG TAATTGAAGG AGAAAACTTT 60  
 AGTGCCTTTT GTNCTGGCCA AGATTTTTTA AAGAGGACAT AGAAGTCAGG AACTATAAAA 120  
 GAAACAATTT TAAATTTTNC TTTATCAAAA TTTAAAGCCA TAGACCGGGA TAANNCATTT 180  
 GCAANATATA TNTCTGACAA AGTCTTGAN TCAAGANTAT GTAAANANCNG N 231

SEQ ID NO:4850

SEQUENCE LENGTH:128

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05774

SEQUENCE DESCRIPTION:

5 GATCAGCCTG AACAACTATA TAAGACCCTG TCTCAACAAA AAATACAAAA ATTAGCTGGG 60  
 TGTGGTGGCA TATGCCTGTA GTCCAGCTA TTCAGGAAGC TCCATTGCAA TCTAGCCCCG 120  
 GTGACAAA 128

SEQ ID NO:4851

SEQUENCE LENGTH:350

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05775

SEQUENCE DESCRIPTION:

15 GATCCTTCCT TCAACCCCAA GGCCAGCTCC CATCTCATTT CCAGAAAGGC TCATACCTGG 60  
 CTTGCAGGGA AGCATCTGTC TTGTCTATCC AGGTGCCAGA ATCCTCTCAG AGTCATTGAA 120  
 GGGTGTTCAC CCATCCCACC CAAGGCTTGG CACTGCGCA GTNTCTTAGC AGGGTCTTGT 180  
 GAGGGCTGGG GGCATCCAGG CACTCAGAAG GCAAAGGAAC CACCCTACCC ATTTGGCCTC 240  
 20 TGGAGGGGGC AGAAGAAAGA AAGAAACCTC ATCCTATATT TTNCAAAGCA TGGGGGTTCT 300  
 NGCATTTAGC TCTGGNGGGT GANCCANTGT GCTTNCCTGN TTAAGTGTCN 350

SEQ ID NO:4852

SEQUENCE LENGTH:355

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05776

SEQUENCE DESCRIPTION:

30 GATCTCAGTT TCCCTCACTC AGGAACCTG TTTCTAAAGT CTTCAAGTAA GTTTNAGTTT 60  
 ATNACTGAGT GGCCTGTAAT GTCAGACGTG AATGGGCCTG ACGGGCAAAT CCATCCCTCT 120  
 CTCCCTCACA GTTCCAGGAG CGGCTTCCCT CGTCTCCCT TACTCCACAG GGAGCCTCCC 180  
 TTGCCAGGAC CAGGGCTGCG ACGGCCATGC TGGGGCAGGT GAGTGCTCTG TTAGCTGCTC 240  
 35 CCAGTGCTGT CCNAGGCTG CAGTTCTGGT CCNNGGGGTG TNAGGGTAGG GAAGGGTGCA 300  
 CTTGAAGGAN GGTGGTTCAA TTTGGGNTN CCTTAACGTT TATAGTCTNN ACAAN 355

SEQ ID NO:4853

SEQUENCE LENGTH:81

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05777

SEQUENCE DESCRIPTION:

45 GATCCAGGAG TTTAAGGTTA CAGTGAGCTA TGACCGCTAC TNACTCCAG CCCAGNCAAC 60  
 AGAACAAGAC CCTGTTTCAA A 81

SEQ ID NO:4854

SEQUENCE LENGTH:136

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear



CLONE:HUMGS05778

SEQUENCE DESCRIPTION:

5 GATCCTCCGT AACATTNCNA GACCAGANAG AACATCCAGA AATCCCTGGN TGGAAGCTCA 60  
 GGCCCCGGGG CCTCCAGCGG CACCAGCGGA GACCACGGTN AGCTCGTCGT CCGGATTGCN 120  
 ACGATTAAAG ACTGAN 136

SEQ ID NO:4855

10 SEQUENCE LENGTH:108

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05779

SEQUENCE DESCRIPTION:

15 GATCAAAATAT TTTTNATTAA CCTATATAAA GAATTTGACT GCTTATGATT CAATACATAT 60  
 GATTTAATAA AATAGATTGC ATTTTNNAAA ATAAAGAATG ATTNAAAA 108

SEQ ID NO:4856

20 SEQUENCE LENGTH:362

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05780

SEQUENCE DESCRIPTION:

25 GATCAACCTC TGATTTTACA TCATGATGTA ATCACCCTG GAGCTTCACT GTTACTAAAT 60  
 NATTAATTC TTGCCTCCAG TGTCTATCT CTGAGGCTGA GCATTATAAG AAAATNACCT 120  
 CTGTCCTTT NCATTGCAGA AAATTGCCAG GGGCTTATTT CAGAACAAC TCCACTTACT 180  
 TNCCACTGGC TCTNAACTC TCTAATTAT ANGTGTTGGT GAACCCNCAC CCAGGCAGTT 240  
 30 ATCCATGAAA GNACAAGTGG ACTAGTNCTA TGNNGTACAA AGGCCTGTAT CNTCTGTNG 300  
 ATGGATTCC TGGTGCTCTT NGCTTGTTTG CAAGTTGCTT AANTTAAAGG CAGNTNTTN 362  
 TN

SEQ ID NO:4857

35 SEQUENCE LENGTH:102

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05781

SEQUENCE DESCRIPTION:

40 GATCCTACCG GAAACCAACC TGTTTACTGT ACTGTTGTAA ATATCATGCC CTTTATATCC 60  
 TGTATATTGG CTTCTTTTAA ATAAAGTGAA ATGTCTTAGA AA 102

SEQ ID NO:4858

45 SEQUENCE LENGTH:195

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05782

SEQUENCE DESCRIPTION:

50 GATCTAAACT TTATGCTGCA TAAATCACTT ATCGGAAATN CACATTTTAT AGTGTGAAGC 60

55

ACTCAANNNTN TAAACCTTAT TATCTAAGGT AATATATGCA CCTTTCAGAA ATTTNTTTTC 120  
 GAGTAAGTAA AGCATATTAG AATAATTGTG GGTGACAGA TTTTAAAAAT AGANTTTAGA 180  
 GTATTGGGG TTTN 195

SEQ ID NO:4859  
 SEQUENCE LENGTH:210  
 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05783

SEQUENCE DESCRIPTION:

GATCCCTTTG AAATNTTTT TTTGTTTGT TGTTTAAATC AAGCCTGAGG CTGGTGAACA 60  
 GTAGCTACAC ACCCATATTG TGTGTTCTGT GAATGCTAGC TCTCTNGAAT TTGGATATTG 120  
 GTTATTTTT ATAGAGTGTA AACCAAGTTT TATATTCTGC AATGCCANCA GGTACCTATC 180  
 TGTTCCTAAA TAAANCTGTT TACATTCAAA 210

SEQ ID NO:4860  
 SEQUENCE LENGTH:139  
 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05784

SEQUENCE DESCRIPTION:

GATCTTTGTT TGTCTGAACA GGTATTTTAA TACATGCTTT TTGTAAACCA AAAACTTTTA 60  
 AATTCTTCA GGTTCCTAA CATGCTTACC ACTGGGCTAC TGTAATGNG AAAAGNATAA 120  
 ANTTATTAA TGTTCCTAA 139

SEQ ID NO:4861  
 SEQUENCE LENGTH:150  
 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05785

SEQUENCE DESCRIPTION:

GATCCTGAAA GAATAATTGG TGCCACAGAC AGCAGTGGAG AATTGATGTT TCTCATGAAA 60  
 TGAAAAGNTT CAGATGNGGC AGACTTGGTG CTGGCGAAAAG AGGCAAATAT GANGTGCCT 120  
 CAAATTGTAA TTGCTTTTAA TGNNGNGNGN 150

SEQ ID NO:4862  
 SEQUENCE LENGTH:155  
 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05787

SEQUENCE DESCRIPTION:

GATCGCAGAT TTNTNTAGAA ACACGGATGT NCATGTCCAG ATCCCTTTT NCAGGTATTA 60  
 AAAATAATTA AAAATAGTCC TGCCTGAGGT TGCAGTGAGC CGAGCTTGCA CTAAGTCACT 120  
 CCAGCCTGGG TGACAGAGTA AGACTCCATG TCAAA 155

SEQ ID NO:4863

SEQUENCE LENGTH:262

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05789

SEQUENCE DESCRIPTION:

GATCTGTACA ACTGATTTTA AAAAAATGCT AAAAAAGCC CCAAAGCATA TAATCTCTAC 60  
 TCCTTACAGT CTCTAGAATT AAATGTACTC ATTTAGACAA CATATTAAAT GCATATTNA 120  
 GCCACTTTAG AGAAACCTCA TAGGCACAGA GTTCCAAGN TTAATTTTAA GNATATCTTC 180  
 ACGAACTTGA CCCTCCTACT CCACATTGCA NCATTTCNT CAGNCAGCAT TTNAATTCCN 240  
 GTATTATGTN TNTNGCAANT NN 262

SEQ ID NO:4864

SEQUENCE LENGTH:232

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05790

SEQUENCE DESCRIPTION:

GATCAAGAAG GCCACTGGTG TGCAGGTGTN AGGCTCCTAC AGGCCCACTC TCTTCAGCAG 60  
 CCACCCGGCC CTCCTCCAG CACCCGTTTT AATCCACAG AACACGGGA ACGTTACTGA 120  
 CTCTGGTGCC TTATCTCGAA GGGACCAGAA GTGCTGCGTG TTCAGGCCAT CNNTGGCTGT 180  
 NTTCTGTCT CTCCTGTCTG TCCACCTACT ACTNNNTNCT NTACTTTANC NN 232

SEQ ID NO:4865

SEQUENCE LENGTH:76

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05792

SEQUENCE DESCRIPTION:

GATCAGAGCC GACACCAGAC GTGATTAGCA GGCGCACAAN ATTCAATTG TTAAATGAAA 60  
 TTGTATTTTG CCCAAA 76

SEQ ID NO:4866

SEQUENCE LENGTH:80

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05793

SEQUENCE DESCRIPTION:

GATCTCTTGG GCCCAGGACT GTTGATGCCT TTNAGTTTG TATTCAATAA ACTTTTTTTG 60  
 TCTGTTGATA ATATTTTAAA 80

SEQ ID NO:4867

SEQUENCE LENGTH:149

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

# EP 0 679 716 A1

CLONE:HUMGS05794

SEQUENCE DESCRIPTION:

GATCCATGCA TTATTTTCCT AGCTTCCTGC CTTGCTCCCT ATTCACITTA CACTGTGAAA 60  
 GGTGGGGGGT GAGTCCCACT TGAGCGCTTC CTGTTGAATA AAGCAGGCAC TTGACCTGGC 120  
 TGTAGCCTAG GTCTTGAGTG AACCCCAAA 149

SEQ ID NO:4868

SEQUENCE LENGTH:209

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05795

SEQUENCE DESCRIPTION:

GATCATGTCT GTACATTGTG TAATGAATGA AAAGCACATA AATNTAATCT ACTTTGAACT 60  
 TTGTAAAAAT AATGTGTGGA GGCTATTCTT GTTCTCCAT CTCAGTCCT GTGTGTGCAC 120  
 GTGTGTGCAA GTGCACATGT GTGTGTGTAA TAACACATTG TAAAGANCAG AAATNACTTT 180  
 AAAAAATAAA CAGAAATGGA GACCTGAAA 209

SEQ ID NO:4869

SEQUENCE LENGTH:335

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05796

SEQUENCE DESCRIPTION:

GATCCGNCCA CCTTGACCTC TCAAAGTGCT GGGATTACAG GCATGAGCCA TCACGCCCGG 60  
 CCACGCTGTT GGTTCCTAAT GACACAGCTT ANCTTTATTG TGAAAAGATT GCAGCAACAA 120  
 ATGAGATTTT ACCTGTATTT GTTAAAAATG CTTATCCTTG TCTAAGACTG GCAACATAAG 180  
 CAGTCTTNG GCTTCTATGC CAATGGNCAC TAGGCAGTAA TACATGTGCA GTGCTANATA 240  
 GAAAAATATT GAGTNAGGGT GTACTNAGGG AAGTTCTCAA TCTTNCCTT NTCANTNTCT 300  
 TCTGTAATAG TAACCTTNA TAACATGNGG ATTCTN 335

SEQ ID NO:4870

SEQUENCE LENGTH:207

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05797

SEQUENCE DESCRIPTION:

GATCTTTCTG CAGGAAATAG TCACTCATCC CACTCCACAT AAGGGGTTTA GTAAGAGAAG 60  
 TCTGTCTGTC TGATGATGGA TAGGGGGCAA ATCTTTTCC CTTTCTGTT AATAGTCATC 120  
 ACATTTCTAT GCCAAACAGG AACAATCCAT AACTTTAGTC TTAATGTACA CATTGCATTT 180  
 TGATAAAATT AATTTTGTG TTTCAAA 207

SEQ ID NO:4871

SEQUENCE LENGTH:208

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

# EP 0 679 716 A1

CLONE:HUMGS05798

SEQUENCE DESCRIPTION:

GATCTGTCAC GGAAGGCGTC CTTTTTCCTT GTAGCTAACG TTAGGCCTGA GTAGCTCCCC 60  
TCCATCCTTG TAGACGCTNC AGTCCCTACT ACTGTGACGG CATTTCATC CCTCCCCTGC 120  
CCGGGAAGGG ACCTTGACAG GACCTCTCCC TCCAAAAAAA GAAAAAAGA AAAAGANAGA 180  
AAAANTAAAT GAGGAAACGT GTTNCAAA 208

SEQ ID NO:4872

SEQUENCE LENGTH:84

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05799

SEQUENCE DESCRIPTION:

GATCAGACCA TAATGTTACA TTATTATCAA CAATAGTGAT TGATAGAGTG TTATCAGTCA 60  
TAACTAAATA AAGCTTGCAA CAAA 84

SEQ ID NO:4873

SEQUENCE LENGTH:337

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05801

SEQUENCE DESCRIPTION:

GATCCTGGCC GAGGTGAGGA ACAGACAGGG GGGGTCTAGA TTCTAAGGGG GTTGGTGGAT 60  
ATTGGGCAAG GCAGGAAACC TCTGGAGACC TCATTTTCTC CATGGGGAAG ACAGCCATGC 120  
TCTTCAGGAG GAGACTCCAA GGGCAAAGNA GGGTGTCTTG GCTGTNCTTG AAGGCGAAAC 180  
CCTGCCATAT CCCAGTGCC AGTCCCCTCA GNCTGTGGTG GCCTTGATC CTGACTGGAT 240  
GTTCTCAGCC CNTTGTCTG GGCAAGAACC CAGAGCTCCC CAGTNTGGAT ACTTATTAAA 300  
CCTNTTTGGA GNCNCAAATA NAAAAAANA AANNAGN 337

SEQ ID NO:4874

SEQUENCE LENGTH:329

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05804

SEQUENCE DESCRIPTION:

GATCCAGGGG CTGATTGGCA GCGTGGAGGA GCAGCTGGCC CAGCTTCGCT GCGAGATGGA 60  
GCAGCAGAAC CAGGAATACA AAATCCTGCT GGATGTGAAG ACGCGGCTGG AGCAGGAGAT 120  
TGCCACCTAC CGCCGGCTGC TGGAGGGAGA GGATGCCAC CTGANTCAGT ACAAGAAAGA 180  
ACCGGTGACC ACCCGTNAAG TGCCTACCAT TGTGGGAAGA GGTCCAGGAT GGNAAAGGTN 240  
AATCTTCTTC CGTGNAGCAN GGTNCAACCA GACCAACCGT TTGAGGGACT TANGTTACCN 300  
NGNGCCGGGC CAACCNAAGG AGGGNNTN 329

SEQ ID NO:4875

SEQUENCE LENGTH:142

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05807

SEQUENCE DESCRIPTION:

5 GATCACTTGC TTTTATGTCC ACTTTTNNAG TGGTACTTAA ATGTAAAGTA ACAACCTGAA 60  
 TTGAGTCATT GCTTTCTGAA GGAATCATTG TCCTTTCTCC AGTTTTTGTN CCAGAATAAA 120  
 AGGAAATATT TTAAGGCCA AA 142

SEQ ID NO:4876

SEQUENCE LENGTH:331

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05808

SEQUENCE DESCRIPTION:

15 GATCCTNCAG CACAGGAATT CTCAAGACCT GAGTATTTT AATAATAGGA ATGTCCACCA 60  
 TGAACCTNAT ACGTCCGTGT GTCCAGATG CTGTCATTAG TCTATATGGT TCTCCAAGAA 120  
 ACTGAATGAA TCCATTGGAG NAGCGGTGGG GNACTAGCCA GACAAAATTT NAGANTACAT 180  
 20 AANCAACGCA TTGCCACGGN AACATACAGN GGATGCCTTT TCTGTGATTG GGTGGGATTT 240  
 TTTCCCTTTT TATGTGGGAT ATAGTNGTTA CTTGTGACAN GTATAATTTT GGAATAATTN 300  
 CTATTAAATA TCANCTCTGA NGNTACTNGT N 331

SEQ ID NO:4877

SEQUENCE LENGTH:61

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05810

SEQUENCE DESCRIPTION:

30 GATCATGCCA TTGCACCCCA GCCTGGGCAA CAACTTAACT TTTTGAAAC TCTGTCTCAA 60  
 A 61

SEQ ID NO:4878

SEQUENCE LENGTH:81

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05813

SEQUENCE DESCRIPTION:

40 GATCCTCTGG ACACGTAACC TATGTCAGNC ACTACATGAT GACTCAAGGC CAATAATAAN 60  
 GCCATTTCTT ACCTGCACAA A 81

SEQ ID NO:4879

SEQUENCE LENGTH:102

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05814

SEQUENCE DESCRIPTION:

50 GATCCANAGA GGACCCCGN CCCCAGAGAC TTGGTTTGG CTCCAGCCTT CCCCTGGCCC 60

55

CGTGACACTC AGGAGTTAAT AAATGCCTTG GAGGAAAACA AA 102

SEQ ID NO:4880

SEQUENCE LENGTH:66

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05815

SEQUENCE DESCRIPTION:

GATCAAAAGG TCTCAGATGA TGATAAAGAA AAGGGAGAGG GAGCTCTTCC AACTGGGAAA 60  
TCCAAA 66

SEQ ID NO:4881

SEQUENCE LENGTH:287

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05816

SEQUENCE DESCRIPTION:

GATCTCTAGA GTCCATTAAG AGCAAGCTAG ATTGAGAGCT CTTGGAGGGC AGGGACTGGG 60  
CCTAGCTCAT GGTTCACAGC TCTTGAGGGT GACTGCACAG TGGACTCAGT CAGTCATGGC 120  
TGAGTTGTGT TGGCTTNATT ATCTCTAGAA TGTAGTTCTC CATTCAAATG CAAATCAGCC 180  
TGGNNGGNTC ACCTGTAGTA AAGGGGGTTT CTACCTNGNG GATGGAAANA GNNNTCTTAG 240  
GNACCTTCCT TGGGCCTCCA GNACTTATT TNGATATCCC NTTATGN 287

SEQ ID NO:4882

SEQUENCE LENGTH:74

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05817

SEQUENCE DESCRIPTION:

GATCATACCA TTGCACTCCA GCCTGAGTGA CCTGACTGAG ACTGTCTCAA AAAGNGTAAA 60  
ANATAAAAAAT TAAA 74

SEQ ID NO:4883

SEQUENCE LENGTH:106

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05818

SEQUENCE DESCRIPTION:

GATCTNACTC CAGCAGAGTC TGTNCCAATN TGGGGTGAGC AGGGCCCCCTG CCATGGAGCA 60  
GCAGGAATTT NAGGGATGGA GCAGGTAAAA GAATGGGAAA CATAAA 106

SEQ ID NO:4884

SEQUENCE LENGTH:96

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05819

SEQUENCE DESCRIPTION:

GATCTTAGTG GTGAAAGTAT GTGTAACCAT GTGATGGTTA AAACANGACT TACAATNCCT 60  
 5 AAATGTGTAA CTGAGAATAA AACGTACTCT NTTAAA 96

SEQ ID NO:4885

SEQUENCE LENGTH:63

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05820

SEQUENCE DESCRIPTION:

GATCCNAAGN CTCCGGGCAG CCGTTATCCC GTGGTTTAAT AAAGCTNCCG CGCGCTCACC 60  
 15 AAA 63

SEQ ID NO:4886

SEQUENCE LENGTH:61

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05821

SEQUENCE DESCRIPTION:

GATCTGCTG TGTGTCTGT TCCATGTTCC GGTTCATCC AAATACACTT TCTGGAACAA 60  
 25 A 61

SEQ ID NO:4887

SEQUENCE LENGTH:274

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05823

SEQUENCE DESCRIPTION:

GATCTCCTTG TCAGGAGCAC CTAAGAACTG GCATGACTCT ACACCCTNTC TCCTTCTNCA 60  
 35 ATGACCTCGT GTCAAGATGG CAGACCTGCA GAGATGAATT TGCCTNGATA CCTGAGTCAC 120  
 CAGNGNGGAG GAAACTCCCA TTNGACATGC ATCACACTCC ACATATGAAA CCCTNCTTTT 180  
 GCTGCACTGT CACTGGGGGN TAGGGGTTAT TACTCACTGC AACTTAGCCT AGCATTAAGT 240  
 40 TGNTTTGACT NATNCANGTT TCAGTAAANG TCGN 274

SEQ ID NO:4888

SEQUENCE LENGTH:268

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05824

SEQUENCE DESCRIPTION:

GATCTGTGTT GGTTCCTTAG ATTGCTAGCT TTTCTCCAG GGGACCACAG CAGGTGAAGC 60  
 50 TCAAGAGCGC ATGGCTCTGC TAATAGTAAA TTGTTTTCAG GGCCTTGTC AGCTGAGAGC 120  
 TTCATGTCCA CCAGATTCTG AGAGGTGTCA GCAGCACTTT TTTTITNATT TGTNGTTNGG 180  
 TTTCCNCCCG GTTATCGGAC CATGGGCTNA GCTCAGGCAC TTGCTGTAGG AGACTNGNNA 240



TTNCTGTAAA GGANNGGTNA TTTANCCN

268

SEQ ID NO:4889

SEQUENCE LENGTH:323

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05825

SEQUENCE DESCRIPTION:

GATCAAACTT GGTCTGGGTA TTGATGAAGA TGACCCTACT GCTGATGATA CCAGTGCTGC 60  
 TGTAAGTAA GAAATGCCAC CCCTTGAAGG AGATGACGAC ACATCACGCA TGGAGAAGT 120  
 AGACTAATCT CTGGCTGAGG GATGACTTAC CTGTTTCACT CTCTACAATT CCTCTGATA 180  
 TATATTTTCA AGGNTGTTTT TCTTTATTTT TGTNAATATT AAAAAGTCTG TATGGCATGA 240  
 CAACTACTTT AAGGGGAAGA TAAGATTTTC TGTCTACTAA AGTGATGCTG TGGTACCTTA 300  
 GGCACTNAAG CAGNGCTAGT ATN 323

SEQ ID NO:4890

SEQUENCE LENGTH:66

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05826

SEQUENCE DESCRIPTION:

GATCTAAGAG TATGGCTAAA CATCTATATA TGCAATCTAT TAAAAGAACT TAATTCGGCT 60  
 ATTAAA 66

SEQ ID NO:4891

SEQUENCE LENGTH:89

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05827

SEQUENCE DESCRIPTION:

GATCTCTGGA GCTCAAGAGG TTGAGGCTGC AGTGAGCCGA TGTGCCAGTA CACTGCAGCN 60  
 TNGGTGACAG AGCAAGACCC TGTCTCAA 89

SEQ ID NO:4892

SEQUENCE LENGTH:344

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05829

SEQUENCE DESCRIPTION:

GATCGCCACT TACCGCAAGC TGCTGGAGGG CGAGGAATGC AGACTCAGTG GAGAAGGAGT 60  
 TGGACCACTC AACATCTCTN TTGTCACAAG CAGTGTTTCC TCTGGATATG GCAGTGGCAG 120  
 TGGCTATGGC GGTGGCCTCG GTGGAGGTCT TGGCGNCGGC CTCGGTGGAG GNCTTGCCGG 180  
 AGGTAGCAGT GGAAGCTACT ACTCCAGCAG CAGTGGGGGT NTCGGCCTAG TNNNNNGGGC 240  
 TCAGTGTGGG GTGCTCTTGG CTTCACTGCA AGCAGTAGCC NGAGGGCTGG GGGTGGNCTT 300  
 NTGGCANTGG CGGNTNTAGC AGNTCCAGCG TCAAATTTN CTCN 344

SEQ ID NO:4893

SEQUENCE LENGTH:342

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05830

SEQUENCE DESCRIPTION:

GATCAGGNAG CCTCCTGATG CCAGAACACC TNAGGCAGAG CCCTACTCAG CTGTACCTGT 60  
CTGCCTGGAC TGTCCCCTGT CCCCGCATCT CCCCTGGGAC CANCTGGAGG GCCACATGCA 120  
CACACAGCCT AGCTGCCCCC AGGGAGCTCT GCTGCCCTTG NTGGCCCTGC CCTTCCCACA 180  
GGTGAGCAGG GCTCCTGTCC ACCAGNACAC TNAGTTCTNT TCCCTGCAGT GTTTTCATTT 240  
TATNGGGGNC AAACATTTTG CCTGTTTCT GGTTCAAAC ATGATAGTTG ATATGAGACT 300  
GAAANCCCTG GGTGTGGAG GGGAAATTGG GNTNAGAGGG GN 342

SEQ ID NO:4894

SEQUENCE LENGTH:138

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05831

SEQUENCE DESCRIPTION:

GATCCTGGAC TTTNCCCTCA GCAAAGATGC CTCNTGGTG GTGACCACGT CAGGAGACCA 60  
CAAAGCGAAA NTNTTNTTT TCCAAAGGCC TGACCGTTAA TGGCTGCAGC CCCTGCCTGT 120  
TTGTNTGGTG TTGAGGGN 138

SEQ ID NO:4895

SEQUENCE LENGTH:109

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05832

SEQUENCE DESCRIPTION:

GATCCACCCG CCTCAGCCTC CCAAAGTGCT GGGATTACAG GTGGGAGCCA CAACACCCGG 60  
CCATGAATTA ACTCCGTAA AAAATAAACG TATACATTCT GTGAGCAAA 109

SEQ ID NO:4896

SEQUENCE LENGTH:274

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05833

SEQUENCE DESCRIPTION:

GATCGGTTTC GCCATCATGA CGCAGTGTCT CCCAGTGGCC CTGTTCTCCC TGGTGGGCTT 60  
CACCCAGATG ACCATNTGGG CCAAGGGCAA GCACCGCAGC TACCTGAAGG AGTTCCGGGA 120  
CTACCCGCCC CTGCGCATGC CCATNATNCC CTTCTGTCTC TGAGCGCTCA CCCCTGCTGA 180  
GGCTCAGCCC CTNAACCCGG TGGCATTCTG GGGGAGGAGT GGGGCCACACA GNTCTCCAGC 240  
ACCCGGAATA AAGCCCGNCT GCCCCAGTCG GAAA 274

SEQ ID NO:4897

SEQUENCE LENGTH:343

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05834

SEQUENCE DESCRIPTION:

GATCTTGCTG GATGTGAAGA CGCGGCTGGA GCAGGAGATT GCCACCTACC GCCGCCTGCT 60  
 GGAGGGCGAG GATGCCACACC TTTCTCCCA GCAAGCATCT GGCCAATCCT ATTCTTCCCG 120  
 CGAGGTCTTC ACCTCCTCCT CGTCCTCTTC GAGCCGTCAG ACCCGGCCCA TCCTCAAGGA 180  
 GCAGAGCTCA TCCAGCTTNA GCCAGGGCCA GAGCTCCTAG AACTGAGCTG CCTCTACCAN 240  
 AGCCTNCTGC CCACCACTG GCCTCACCTC CTGAAGGNCC GGGTCAGGAC CCTGCTCTNC 300  
 TGGNGNAGTT TCCCAGGTAT NTTCNNTGGT TCCTGTTGGT GAN 343

SEQ ID NO:4898

SEQUENCE LENGTH:338

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05835

SEQUENCE DESCRIPTION:

GATCAGNAGC CCCAACACA GGCAAGTCCA CCCATAATA ACCCTGCCAG TGCCAGGGTG 60  
 GGTGTTGGGAC TCTGGCACAG TGATGCCGGG CGCCAGGACA GCAGCACTCC CGCTGCACAC 120  
 AGACGGCCTA GGGGTGGCGC TCAGACCCCA CCNTACGCTC ATCTCTGGAN GGGGCAGCCC 180  
 TGAGTGGTCA CTGGTCAGGG CAGTGGCCAA GCCTGCTGTG TCCTTCCTNC ACAAGGTCCC 240  
 CCCACCGTTC AGTGTACGCG GGTGACGTGT GTTCTTTTGA GTCCTTGAT GANTAAAAGN 300  
 CTGGAACCTN ANAAAAAGTG NGNNGNGGTN TNTGNTAN 338

SEQ ID NO:4899

SEQUENCE LENGTH:356

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05836

SEQUENCE DESCRIPTION:

GATCAGCCCC TGACTTTNTT AAAAGATATC AGAAGTGTCT TGGAGCCAAC TAGAGGCAGG 60  
 GTCATCCTTG CCCTTNTCCT CCCCTTTCAT CCCTATGTGG AAAACGTAGG TGGCAAGTGG 120  
 GAGAAACCAT CAGAAATTTT GGAAATCAAA GGACAGAACT GGAAGANCA AGTGAATAGT 180  
 CTGCCTGANG TTTTCAGAAA ANCTGGTTTT NTTATCGAAG CTTTCACCAG ACTACCATAC 240  
 CTGTNTGAAG GCGACATGTN TAANGNCTAC TNCGTTCTGG NTGACGCTNT CTTTGTCTCTC 300  
 AANCCAGTAT AAACACGTGG NGGTCGAAAG CTTCAGAGTC CGTACCNTNC TGGATN 356

SEQ ID NO:4900

SEQUENCE LENGTH:111

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05837

SEQUENCE DESCRIPTION:

EP 0 679 716 A1

GATCCCCCAG AAAAGAAAGC TACAGAAGAA ACTGGGGCTC CTCCAGGGTG GCAGCAACAA 60  
TAAATAGACA CGCACGGCAG CCACAGCTTG GGTGTGTGTT CATCCTTGAA A 111

5 SEQ ID NO:4901  
SEQUENCE LENGTH:293  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05838

10 SEQUENCE DESCRIPTION:  
GATCTTAATG GTTTCGATGG TAGGGAATAC GGAAAGGATA CACTGCTAAT ATTGTGTCTA 60  
ACAATAAAGC AAACAACCTCG ATGCTGTAAG AAGACAAGCT GTTTGAGCTT TCAAACACAC 120  
AGGGGCACAG CACAATTCAG AAATACCCAG GAGGATTCCT GCAGGCTTAA CAGTTGGCAT 180  
15 CGTACTGAAA TGAAACGTGT ATTAACANGA AANTGTCAAA CTTTGGGGA AACAAATTTT 240  
CTGTTACTTC CCACCCNACT AAAAGGGAAG ATAAAACCAT CATCACCAGN NNN 293

20 SEQ ID NO:4902  
SEQUENCE LENGTH:99  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05839

25 SEQUENCE DESCRIPTION:  
GATCTACATA AGGAAAGGAA GAATATTAAA GAAGAAATAA ATGAAGACGA GATAAAATCT 60  
TTTTTCTTAA TTATCAAATA AAAGTTTGTT AAAAGTAAA 99

30 SEQ ID NO:4903  
SEQUENCE LENGTH:290  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05840

35 SEQUENCE DESCRIPTION:  
GATCAGGCAG TTCCTGGACT GTTCCACCAC TCAGAGTGAC CTGTCCCTGT GTGAGGGCTT 60  
CAGCGAGGCC CTGAAGCAGT GCAAGTACTA CCATGGTCTG AGCTCCCTGC CCTGAAGAGG 120  
TCGGTGCAGA CTCGGGGGCC AGTCCTGCAC NCACNTCTAC CCCTCGCCGA CAGCCAGACC 180  
ACAACACCAG ATTGTACCCA GATAGCTGGG ATTGGAAGTN AGGAGGTTTC TCACCCACAC 240  
40 GATAACCCAA GACACAAATG TGCAATTAAG AGTTTATTTT AGACCACAAA 290

45 SEQ ID NO:4904  
SEQUENCE LENGTH:68  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05841

50 SEQUENCE DESCRIPTION:  
GATCTGCCCC CCTTGGCCTC CCAAAGTGCT GNGATTNCAG GCATGAGGCG CTGCATCAGT 60  
TCTGCAAA 68

55

EP 0 679 716 A1

SEQ ID NO:4905

SEQUENCE LENGTH:223

SEQUENCE TYPE:nucleic acid

5 TOPOLOGY:linear

CLONE:HUMGS05842

SEQUENCE DESCRIPTION:

10 GATCTGCAAG CNGGAGCCCT CCTACCCGCA GCTTNAGCAC AGNATCATCC AGCCCTGGGG 60  
AGGCGCACCC TTAAGCAATA CAGACTGGGC TGAGGCTGAC AGGCAGAAGA CTAACAGAGC 120  
GCANTCTGCA CACGCAGGTT CTGGGGCGAC CTCTGGCCCT GGNCATCTCT GNACTAACTN 180  
ATCTGAATTA TGGAAAGTGG CAGTNTTGGT CANTAGTTTT NNN 223

SEQ ID NO:4906

15 SEQUENCE LENGTH:293

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05843

20 SEQUENCE DESCRIPTION:

GATCCGTCCG CTTCCGCCCTC CCAAAGTGCT GGGATTACAG TCGTGAGCAC CGCGCCCGGN 60  
CTGNGGTCAA TTTCTATGT CAAGTGAGTG ACATTATTTT TACAAGTATT TTCTTCTTTT 120  
TAAATTATA CCAGCAAATA CAGTTAATGC AGAAACCTAA GTAATTTGAG TGTAGCTATT 180  
CACAATCTAT GTGAAGNNNN CAAAATAGAA TGACCAGTTT TATTATAAT TAAGGGGCTT 240  
25 AATTTTCTAA AAAAGNANAN AANTGAGCCN TATCTCTGTG TTTTATAATT ATN 293

SEQ ID NO:4907

SEQUENCE LENGTH:65

30 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05844

SEQUENCE DESCRIPTION:

35 GATCACTGA GGCCAAGTAT TAAAACCAG CCTGGGAAAT ACAGTGAGAC CTTNTNTCTA 60  
CCAAA 65

SEQ ID NO:4908

SEQUENCE LENGTH:225

40 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05845

SEQUENCE DESCRIPTION:

45 GATCCTGAAG GCCTTCGAGT ATTTTACTAT TTGGTACAAG ACTTGAAATG TTTNGTNTTC 60  
AGTCTTATTG GATTACACTT CAAGATTAAN CCAATTTAAA TTGTATGTNT TCAGGCTGTT 120  
TGTATATTN ATTAAGGGAT GGGAGGGGTT ATTTGTCATT TACAGTATTG GGGTTTTNAT 180  
GAATGTGAAG CAAACAANAN ANATTTGTNT GTAAACTGTT TTNTN 225

50 SEQ ID NO:4909

SEQUENCE LENGTH:135

55

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05846

SEQUENCE DESCRIPTION:

GATCAGGTTG GGGGGCAGCC CCCAGTCCCT TTCTGTCCCA GCTCAGTTTT CAAAAGACA 60  
CTGACATGTA ATTCTTCTCT ATTGTAAGGT TTCCATTAG TTTGCTCCG ATGATTAAAT 120  
CTAAGTCATT TGAAA 135

SEQ ID NO:4910

SEQUENCE LENGTH:225

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05847

SEQUENCE DESCRIPTION:

GATCCAGTAT TTGATGAAAC TCATGAAAGT GGGTGGAGCC CATCTNGCCC CTCCTCTTTT 60  
CTAGGACGCA CTATATGTGA CTGTGACTTT CAAGGACATT TGTTGCCAT TTGCTGATTT 120  
TTTTGGGAAG TNAATTNCTA ACTNCTTTCA CTGATAAATG NAGAAAAGTA TTGCACCNGT 180  
GAAATGCACC AAATGAATNG NGTTTGTAA TTAATAAAN NTNTN 225

SEQ ID NO:4911

SEQUENCE LENGTH:281

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05848

SEQUENCE DESCRIPTION:

GATCCCCTAA GGTCTGGCC CAGGNTGCC CAAAGAGAAG CCCAGGATGG TCGGCTGCCT 60  
GGGGGCATTG TCACCACGTN GCCATGACGG CTGGTCCNA CAGGNCAGC TGGGAGGACT 120  
GGTTGTGCTG CTGGAGAAGG GCTGGAGAAG GCAATGGCAT GCTGCCGCTT TGCCAGTCCC 180  
TAGAAGTCGC GGTGCAGGTG ATGTGTNGNG AGCCGTNCCT NCANTGGGCA GGCCNGGGAG 240  
TNTACTTGTG TGCAGCTGAC CCAAGGGCAG CCACATNTNN N 281

SEQ ID NO:4912

SEQUENCE LENGTH:179

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05849

SEQUENCE DESCRIPTION:

GATCAAAACC CAGCAGAGTG CAAGCAGCAG TGAAGCAGGA TGTATGTGGC CTTGAGGATA 60  
ACCTGCACTG GTCTACCTTC TGCTCCCTG GAAAGGATGG ANTTACATC ATTTGGGCAA 120  
GGCCTATTTT CAAGGTTTNT TTGGTNTGNT TGGNTNGCTT GTTTTGGNT TNTGGCAGN 179

SEQ ID NO:4913

SEQUENCE LENGTH:313

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05850

SEQUENCE DESCRIPTION:

5 GATCGAGGGC TGGGNACCCC GGTGTNAGCA GGATGGGGCC CTGCCCTCCC GTGGNAGTTG 60  
 TGGACTCGAG CCCAGGGGCT GCCCGTAACA GCGGTGTCCC AGGTCCCTGC CATCCNATTT 120  
 TACCTGGAAT GTCTTCTCTG GAGTTTGAA TTGCTTGAGG AACCTGCGT GTGCTTGGAG 180  
 AGGCCAGAGG GCTTGCTGAG AACCCCATGG ACAGTGAGGA GCGGGATTGC AACCAAGGGC 240  
 TGGACTCCCA CACCTNTGGC CTGCGTCGCC CAGTTCTTTG TGGCTCTGAA GAATTGGNCG 300  
 10 CTGTGAAAA GTN 313

SEQ ID NO:4914

SEQUENCE LENGTH:124

SEQUENCE TYPE:nucleic acid

15 TOPOLOGY:linear

CLONE:HUMGS05851

SEQUENCE DESCRIPTION:

20 GATCTTATGT GTTACAAAAT TGGAGAAAGT ATTTAATAAA ACCTGTTAAT TTTTATACTG 60  
 ACAATAAAAA TGTTTCTACA GATATTAATG TTAACAAGAC AAAATAAATG TCACGCAACT 120  
 TAAA 124

SEQ ID NO:4915

SEQUENCE LENGTH:313

SEQUENCE TYPE:nucleic acid

25 TOPOLOGY:linear

CLONE:HUMGS05852

SEQUENCE DESCRIPTION:

30 GATCCCCTGA ATGCCCTTGG AGGCCAGTAG AGCACACAGG GTATCCACAT GTTACCCTGC 60  
 AGCTACATTG TTGAGTTAGT GATGATATTG TATATGCTCA TGGTCTNAAC TGGATTACAA 120  
 AAAGCAAATA CTAGAACAGC TAGCTCATCT TTNACCCAAT GACTTAGTA TTTTCNTGCA 180  
 CTGGTTTAAT CATGNTTAAT ACTACAAANC AAAANTAANT ATTTACAGT GGTGGGNTT 240  
 35 TTTTGTTTT ANCCACAGT TNGANTTAGT TAGCCTTGCT GGGGCCATAA TATGCTTCAG 300  
 GGTGTGTAAN TGN 313

SEQ ID NO:4916

SEQUENCE LENGTH:312

SEQUENCE TYPE:nucleic acid

40 TOPOLOGY:linear

CLONE:HUMGS05854

SEQUENCE DESCRIPTION:

45 GATCTGGGGA CTACCAGAGA CTCTGGGAAA TGGACAAGGT GGGGGGCCCC ACTCTTTCTC 60  
 TCCTGCAGTC CCGTAGCTGG GGCCTCCTTC CTTCTCAGG TCTCCCAGC CCAGTCCCCT 120  
 TGCTCCCATC CCACTCGGTG CTGTTGGTA GGGGCCCTGC CAGGAACTGA CCAGCTNAGC 180  
 GAGGAGCCAT AATGTGCATA TGTGCACAAG CAGGGTTTGG GGAGGGGGNT GTGAGGGGNT 240  
 50 GTGCCCAGGT GTTGCCCCCT ATCTCCTGGG GAGGGTGAGG NAGGGCAGG ACAGTNTCCA 300  
 GGGGTNAATT TN 312

55

SEQ ID NO:4917

SEQUENCE LENGTH:55

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05856

SEQUENCE DESCRIPTION:

GATCTAAATA TTCTGGTTTG GATTAGGCAA TAAAAATTTT TTTGGCAACA GGAAA 55

SEQ ID NO:4918

SEQUENCE LENGTH:370

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05857

SEQUENCE DESCRIPTION:

GATCCAAGGA NCGTTTGGNT TTTCCTAGCT ACATCTGGTA CCTGGGCTGG CATTATGGGA 60  
 ATNAGGTTCT ACCACTCTGG AAAATTCATG CCTGCAGGTT TAATTGCAGG TGCCAGTTTG 120  
 CTGATGGTCG CCAAAGTTGG AGTTAGTATG TTCAACAGAC CCCATTAGCA GAAGTCATGT 180  
 TCCAGCTTAG ACTGATGAAG AATTAAAAAT CTGCATCTTC CACTATTTTC AATATATTAN 240  
 GAGAAATAAG TGCAGCATTT TTNCATCTGN CATTTTACCT AAAAAAAG ACACCAAANC 300  
 TTGGCAGAGA GGTGGGAAAA TCAGTCATGT TTTACCAANC CTANCNGAGG TTGGCGTGTT 360  
 TTGTTACCTN 370

SEQ ID NO:4919

SEQUENCE LENGTH:168

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05858

SEQUENCE DESCRIPTION:

GATCTTGAAA GGAAGTATGC TGTCTCTAT CAGCCTCTAT TTGATAAGCG ATTTGAAATT 60  
 ATTAATGCAA TTTATGAACC TACGGAAGAA GAATGTGAAT GGAAACCAGA TGAAGAAGAT 120  
 GAGATTTCCG AGGAATTGAA AGAAAAGGCC AAGATTGAAG ATGAGAAA 168

SEQ ID NO:4920

SEQUENCE LENGTH:128

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05859

SEQUENCE DESCRIPTION:

GATCATGGGA GGGAGCTGAG GGGTTAATAT ATATACATAC ATACACATAT ATATATTTNN 60  
 GTAAATAAAC AGGAACTGAT TTNCTGCCTC CATCCCACCC ATGAGGGCTG CAGGNACTAC 120  
 AAGAGAAA 128

SEQ ID NO:4921

SEQUENCE LENGTH:166

SEQUENCE TYPE:nucleic acid



# EP 0 679 716 A1

TOPOLOGY:linear

CLONE:HUMGS05860

SEQUENCE DESCRIPTION:

5 GATCGGGTCC CCAGAGCCAC CATCTCCTGA GCCTCCCACC CCGCTGCCTG GGCCCTGTGG 60  
TTGCTGGGCC TCCCACCTCA AGGAGGGGAA GGTGTACAG CCCGAACCCG TGGAGCAATG 120  
CCCTGTNTGG NCTCCAAAAC CAAAATAAAA CTGGTGTAC TTAAA 166

SEQ ID NO:4922

SEQUENCE LENGTH:97

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05862

15 SEQUENCE DESCRIPTION:

GATCTTTAAA CTGCTTTATA CACTGTCACG TGGCTTCATC AGNTGTGTGC ATTCAGGAT 60  
GGTTTTTAAA GNAACCTCAG AAAGNTATTT CCTTAAA 97

SEQ ID NO:4923

SEQUENCE LENGTH:211

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05863

25 SEQUENCE DESCRIPTION:

20 GATCACAGAA AAATTAAGAA TCCAAGTGCT CTCTAGATTT GTTGATAAAC ATTTTATGCT 60  
TGCAATTTAAA CTGAAATGT ATGAGCAGAA TGAGACAATC AGTTAAATCA GAAATGAGAA 120  
GTATTATAAT GTAAAGGCCT TGTGTTGCTG TAGCAATANN ATGACCAAGT GCAATGACTT 180  
30 GATTTAATAA AATCATATNT TAAAAGTTAA A 211

SEQ ID NO:4924

SEQUENCE LENGTH:338

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05864

SEQUENCE DESCRIPTION:

40 GATCAACGCC TCACTGAAAC ATGGCTGTGT TTGCAGCCTG CTCTAGTGGG ACAGCCCAGA 60  
GCCTGGCTGC CCATCATNTG GCCCCACCCA ATCAAGGGAA GAAGGAGGAA TGCTGGACTG 120  
GAGGCCCTG GAGCCAGATG GCAAGAGGCT GACAGCTTGC TTTCTGTGT GTACTCTGTC 180  
CAGTTCTTTT AGAAAAAATG GATGCCCAGA GGAATCCCAA CCCTTGGCTT GGGGTCAANG 240  
AAACAGCCAG CAAGGNGTTA GGGGNCCTAG GGCACCTGGG CTGTTTGTG CCCATTGAA 300  
45 NGGCGGNCTT NTGGGCCCTG GGCCCTTNAG GTTTGGTN 338

SEQ ID NO:4925

SEQUENCE LENGTH:259

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05865

## SEQUENCE DESCRIPTION:

GATCCTGTCT TCTTTCATGT TTACTACGAG GCATGACATT CATGGCAAAA CAGGGATGCC 60  
 GTTTCOAAGA GCAGCTATAA AACAATCTGT TTTCTAAAG ACAGCCACTC TGAGAAGGNG 120  
 ATGANGGAAC ACGGCAGGGT TCATCANTTC ATAGACTGTT TCCAAAAATA ATTTTAAAC 180  
 TTTTCCACTA GGCATCTGTG TCTTTAACCA CTGCACANTG GCNTTGCCTG TTAAATANAA 240  
 GGTNNTCANN ACGTGGAAA 259

SEQ ID NO:4926

SEQUENCE LENGTH:195

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05866

## SEQUENCE DESCRIPTION:

GATCCACCCA CCTCGGCCTC CCAAAGTTTT GGGATTACAG GCACGAGCCA CAGTGCCAGC 60  
 TGAACACGTT TCCTAACAGAG AAGTGCGCAG AGCATGATGG AGCCAGCCT GGGCTTGACA 120  
 TTTGGAGAGA ACTACAGAGA AGTATCCAGA CTGTTGTTAC TAATAAATAA ATACATAAGC 180  
 TCCGCTGNAC GGAAA 195

SEQ ID NO:4927

SEQUENCE LENGTH:56

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05867

## SEQUENCE DESCRIPTION:

GATCCAACAA TAAATATTA ATTTATAAAA AAGAAATTT AAAAGTAAC AAGAAA 56

SEQ ID NO:4928

SEQUENCE LENGTH:82

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05868

## SEQUENCE DESCRIPTION:

GATCATCCTC CAAGCAGTCC TGTTCAATCA TGTCTGCCTC AAATTGCTGG TGAATACATA 60  
 AAATAGTTAC TTGCTAATCA AA 82

SEQ ID NO:4929

SEQUENCE LENGTH:286

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05869

## SEQUENCE DESCRIPTION:

GATCCACCCG CCTCAGCCTC CCAAAGTGCT GGGATTACAG GCAAAAGCCA ACACACCCGG 60  
 CCTGGATATG AATTATAAT ACCCTACAGT GCAGCACAAG AAGATGCACT CAAAGCACTG 120  
 ATGTGAGGAA GTACTTGCCC CGTAGCAGCT ATTCCTCTA CCAGTGTAAG CAACTCTAA 180  
 GGCTAGGGCG GGCAGCACA GGCACANGNN TATACTAGCC AGGGGTTTAA TATAANTACA 240

ACCAGCATAG NAAGNCCCAA ANCTNTACAG NNNCCAANAC CNGGNN

286

SEQ ID NO:4930

SEQUENCE LENGTH:311

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05870

SEQUENCE DESCRIPTION:

GATCTGTGCC CCATGCCTGT CCAGCCTGGG CAGCCAGGCT GCCAAGGCCA GAGTGGCCTG 60  
 GCCAGGGGCT CTTCAGGCCT CCCTCTCTCT TCTGCTCCAC CCTTGGCCTG TTTCATCCCC 120  
 AGGGGTCCCA GCCACCCCGG GCTCTCTGCT GTACATATTT GAGACTAGTT TTTATTCCTT 180  
 GTGAAGATGA TATACTATTN TGNTAAAGCG TGTCTGTANT TANTGTGTGA GGANCTGCTG 240  
 GGNTTCANTT CGNGTGNACG GTGGGAGAGN TTGGGTGCCC GNGAGAATNG ACGGGCTNAT 300  
 GGNTTCCTTT N 311

SEQ ID NO:4931

SEQUENCE LENGTH:305

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05871

SEQUENCE DESCRIPTION:

GATCAAAAAA CTACCTATCT GGTACTATGC TTTTATCTG GATGATGAAA TAATCTGTAC 60  
 AACAAACCCT GGTGACATGC AATTACCTA TATAGCAAGC CTACACATGT GCCCCTGAAC 120  
 CTAACAAAAA AGTTAAAGA AAAACGTTTG GNTTATTTT CCTCTTTNGA ACAANGNCAT 180  
 TGGTTTGGCC AAGGNTACA AATAANCCAA CGGGAAAAAN GANAGGTTCC AGTTTTGTNT 240  
 GANAATTCTG ATTAAGCCTC TGGGCCCTAC AGCCTGGGGA ACCTGGNGAN TCCTACACCC 300  
 GGGAN 305

SEQ ID NO:4932

SEQUENCE LENGTH:233

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05872

SEQUENCE DESCRIPTION:

GATCCAGAGA CACACAAGAG CACCAAAGCA GTCATCCCA CTGATGACAC CACGACGCTC 60  
 TCTGAGAGAC CATCCCAAG CACAGACGTC CAGACAGACC CCCAGACCCT CAAGCCATCT 120  
 GGTTTTCATG AGGATGACCC CTTCTTNTAT GATGANCACA CCCTNCGNAA ACGGGGTCTG 180  
 TTGGTCGNAG NTGTGCTNTT CATCACAGGG ATNATNATTN CTNACCAGTT GGN 233

SEQ ID NO:4933

SEQUENCE LENGTH:276

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05874

SEQUENCE DESCRIPTION:

EP 0 679 716 A1

GATCTACTAA AACACTAAGT TTCATACTAA ACCGTTTCAT GTATCTTTAT CATATTCTGT 60  
 AAAGTTTACA CTTTGATGTA CCTGTATTTT ATTGAAATAC TGTCCAGCTT CAAATGGAAC 120  
 AATATTGTAT GTAGAAATTC CAATTACTGG TTTGTCAGTN GGATTCTTAG CTCTGTAAAA 180  
 CGCCAGTGCA GTCTCTCCTG GCACCACCTG TNTTAAAGAG TATATATATN ATCAGTNCTT 240  
 TGNNTCTCAC AAAGNGCCTC NNTTCCCTG CTAAGN 276

SEQ ID NO:4934

SEQUENCE LENGTH:89

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05875

SEQUENCE DESCRIPTION:

GATCTGGTGG GCTGGGTCCC CCTCTCGACC NCAGACGCCC CTAAGTCGCC CTTTCTCATT 60  
 TTATACAATA AACATTCTCC ACCTACAAA 89

SEQ ID NO:4935

SEQUENCE LENGTH:313

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05876

SEQUENCE DESCRIPTION:

GATCAGGAGT TCTAGGCTGT AGTGTGCTAT GAGCACATCT ATGAATAGGC ACTGCGTTCC 60  
 AGCCTGGGCA ACATAGTGAG GCCCCATCTC TAAAAGGGC ACACGTGTAT AGGACAGCTC 120  
 CATTATAATC TTATGGGACC ACTGTAATAT GTGTAATCCA TTGTTGACTG GAACATCCTT 180  
 ATGCAGCACA TGACTGTGTA CATAACTTAA AATTTATCAT TTAACCATTT TTTAAGTGTA 240  
 CAATTCGGTG GTATAAAGTA CATTTACATT ATTGTGTAAC TATCACCTCT ATCCATCTCC 300  
 CTAACTTTTT CNN 313

SEQ ID NO:4936

SEQUENCE LENGTH:224

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05877

SEQUENCE DESCRIPTION:

GATCCGGGT CAGAGTGACG TTTTCTCTCA CAAGCAGAAG GTAACAAATT TCATGCTCTC 60  
 CCTAAATTCT GTCTGATTTT GCCTNGTGGT GATAGATTGT CANGAACACA ATGTCCTCTG 120  
 GAGAAATCTA TTGACAGAAA TTGGTGCAGT GTTANCAACG CTAATGTAAA ACACAGANTT 180  
 TACAGAAAAAN TAGAGAAAAT AAACACATTT GTNNGCCTCA GAAA 224

SEQ ID NO:4937

SEQUENCE LENGTH:314

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05879

SEQUENCE DESCRIPTION:

EP 0 679 716 A1

5 GATCCTCTCT CCCAGGGAAT CCGACACAGG AGGAACCCCT TCTNTGGTTG ANCTGGGCCA 60  
GGCCTAAGAG TAGCAGGAAC TCTAAGACCA CAGAGTTTTT TATAAATGTA TAAATGTATC 120  
AAGCCAAATN TGCAGATGCT AACTGGACAT TCTGGGGAAC TGGGCACCAG GNGTGCCTTC 180  
ATACACTGTA CCCAGCTCT NTTCTAAAG AGAAGTNGGT GGGCACACTT GAACTGTTTG 240  
GTGGNCCNAA CCACAGGANG CTGCAATTNT NTGGNTTAGG GTGATACTTT TGGCCCTNCN 300  
TGTGGCCCT NTN 314

10 SEQ ID NO:4938  
SEQUENCE LENGTH:143  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05880  
15 SEQUENCE DESCRIPTION:  
GATCTGAAAG TATAAACTG CTAGAAGAAA ACATGGATAT TTGATTGGAC AATGATATTT 60  
GGATATGACA CCAAAGCCT AGGCAACTAA TGCAAAAATA GACAGGGAGA GTACATCAAT 120  
CTTAAAAACC TTATGATGGC AAA 143

20 SEQ ID NO:4939  
SEQUENCE LENGTH:389  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
25 CLONE:HUMGS05882  
SEQUENCE DESCRIPTION:  
GATCTGAAAT ACCATCTCTA CCAGAGACTC TGGGAAAAAT AATGGATTCC AAGTGTTAAA 60  
CGGAATTAAG TTTGGCCTAA AACTGCCTCT GTACATAGTG ACTTATAACC TCACTTAATG 120  
30 TATAAGCAA CTGGGACCTG ACTTGAGAGT AACTTCTGT AACAAGCAGC AGAGTCTCAC 180  
CAATCACATG CTGAAGGCTC CAAAACATG NCTATGTGAG GTGGAGGCTG ACCTGCAGTC 240  
AGTCTGGCCA TGTACATGNG TCTTCCCTT NCTGTGGCTA TAAATAAATA CAGCCTGNAC 300  
ACANCGGACA GGNGGACCGT TCTGNACCAN GNTTGGGTCC TGNNGNTAC CNAGGTNGAN 360  
35 GNAACTTTTT TTNGCTCAN TAAACTGN 389

40 SEQ ID NO:4940  
SEQUENCE LENGTH:131  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05885  
SEQUENCE DESCRIPTION:  
GATCTCTCCG CCTTAGTTAA GAGCATGTGT CGGGAAATTC CTCAGAGTGC TCAGAGTCCC 60  
45 TGTATNTTTA TACCTTTTAA CAATGTAAAC TGTTCAGAAC TGNTTTTGT AACAAAACCT 120  
NNTGTTTAA A 131

50 SEQ ID NO:4941  
SEQUENCE LENGTH:115  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear

55

EP 0 679 716 A1

CLONE:HUMGS05886

SEQUENCE DESCRIPTION:

GATCATGGCG CAGTTGGNCA GGAGATGTTT TGCCCCATCT GCTGTAGCGA ATATGTGAAG 60  
TGGGAGGTGG CAACNGAGCT GCCNTTCCAC CACTATTNCC ACAAGCCGTG TGTNN 115

SEQ ID NO:4942

SEQUENCE LENGTH:105

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05887

SEQUENCE DESCRIPTION:

GATCCTCCCG CCTTNGTCTG CCAAAGCACT NGGGTTACAG ATGTGAGCCA CTNACCCAG 60  
CCTAATCTTN ATAAATCTCC ATCCCCATTA CTCTGGTTCA CCCNN 105

SEQ ID NO:4943

SEQUENCE LENGTH:350

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05888

SEQUENCE DESCRIPTION:

GATCACGGAC GTGCAGCTCG CCATCTNCGN CAACATGCTG GGCCTGTCGC TCTTCTNGCT 60  
TGTTNGTTCTC TATCACTACG TGGCCGTCAA CAATCCCAAG AAGCAGGANT GAAAGTGGCG 120  
CTTTCTCCGC CCCAGGGTTC CAGGACATAG TCTGAGGCAA GATGGAGGGT ATGAGGGGCC 180  
TTCACACTNC ACTTCATCCC TTCTACCCAT CACAACATAC AAAGCAACTA CACCTGGGAT 240  
TTTNCCAAAG AGCTTTNATT TCCTCAGNGT CTTCCTTAAT CCTATGGGNA CANGGAAGCT 300  
GCCACTNGNN TAGGGNCCAG TATAGGGGGC TTNGCTTTTT TAACTGCNTN 350

SEQ ID NO:4944

SEQUENCE LENGTH:304

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05889

SEQUENCE DESCRIPTION:

GATCCAGCGG CAGTGACAGA ATCCAAAGAG GGAACAGAGG CATCAGCATC GAAGGGGCTG 60  
GAGAAGAAAG AGAAATGATG CAGCTGGTGC CCGAGCCTCT CAGGGCCAGA CCAGACAGAT 120  
GGGGGCTGGG CCCACACAGG CGTGCACCGG GTAGAGNGCA CAGGTAGGCC AAGGGGNAGC 180  
TCCAGGACA GGGCAAGGGG GCAGCANGGA TACCTGCNAG CCAGGGNCTC TNTGGCCTNT 240  
NTTTTCCTAN TCCNTTTTTT TGGCCCTTCT TTTTNTNTG CCGTACANCN TGCAGGCAAA 300  
AGNN 304

SEQ ID NO:4945

SEQUENCE LENGTH:64

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05890

# EP 0 679 716 A1

## SEQUENCE DESCRIPTION:

GATCAAAACA AAACAAAAA GTTGTCTCTG AAAAAAAAAAC AAAACAAAAA AGTTGTCTCT 60  
GAAA 64

SEQ ID NO:4946

SEQUENCE LENGTH:136

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05892

## SEQUENCE DESCRIPTION:

GATCAACCTT TGINTGCGAG GGTCTAAGTA GGGTCGAACA CAGAAGTGGG AAGNAGAGGG 60  
GTGGGCCAGG GGCTAATGGT GTCACGTGTG AAAGTTTTTG ACATACTAGC TCTATAAATA 120  
TATGAATATG GACAAA 136

SEQ ID NO:4947

SEQUENCE LENGTH:162

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05893

## SEQUENCE DESCRIPTION:

GATCCTCTGC TACCAAACAA TGATGTGGAT TCTTTGCAC AGAAATATTT AAGGTGGGAT 60  
GGTAAAAAAT GTCACAAAAG ACTCCTCACC AATACTTNAT GTTGATATCA CTTAATATTA 120  
ACCAGACTTT GCTGTATTGC AATAAACAG AGAACTGTTA AA 162

SEQ ID NO:4948

SEQUENCE LENGTH:405

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05894

## SEQUENCE DESCRIPTION:

GATCATCGCC TCCCTGGTTT ATAGTAGACA GACCTTTTCT GTTTTTCATC CGACATAATC 60  
CTACAGGTGC TGTGTTATTC ATGGGGCAGA TAAACAAACC CTGAAGAGTA TACAAAAGAA 120  
ACCATGCAAA GCAACGACTA CTTTGCTACG AAGAAAGACT CCTTTCCTGC ATCTTTCATA 180  
GTTCTGTAA ATATTTTGT ACATCGCTTC TTTTCAAAA CTAGTTCTTA GGAACAGACT 240  
CGATGCAAGT GTTCTGTTC TGGGAGGTAT TNGAGGAAA AANCAAGCAG GATGGCTGGA 300  
ACACTGTACT GAGGAATGAA TAGAAAGGCT TCCAGATGTC TAAAAAGATT CTTTAAACT 360  
ACTGNAACTG TTACCTAGGT TAACCANCCC TGTTTGAGGT ATTTN 405

SEQ ID NO:4949

SEQUENCE LENGTH:330

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05895

## SEQUENCE DESCRIPTION:

GATCTGCTCG GAATCCTCCT GCTAAAGAAG GNTCTGGGCG TGAGCTCAGC CGCCCCGCAC 60

EP 0 679 716 A1

CCCAAATCCA GTACAGGAGG CTGCTGGTAC AAATACTGCA GTAATGACAC CAATAATGGG 120  
GCAGACACAA CAGCGTGGCT TAGATTGTGC CCACCNAGGG AAGGTGCTGA ATGGGACCCT 180  
GTTGATGGCC CCATCTGGAT GTAAATCCTG AGCTCAAATC TCTGTTACTC CATTACTGTG 240  
5 ATTTCTGGCT GGGTCACCAG AAATATCGNT GATNCAGACA CAGATTATTG TTCCTGCTGT 300  
ATTTGCTGGT TTNCCTGGTT GAATTGGTTN 330

SEQ ID NO:4950

SEQUENCE LENGTH:308

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05896

SEQUENCE DESCRIPTION:

15 GATCCAGAAT TTATTAGTTT AAAATGCAGG TGAACTTTTT TTGCGTTTG GTTACTTGT 60  
CTGTCAAATG TTTCCTTAAA CATGAACTG AATAAGGAGA AGAGTATTTT TAACACTTAA 120  
ATTTCTTGGC AAATTTTAAA ACATTTTNA GTCTGTAATA CACTCCACTT GANGCACTTA 180  
AGTNTTCCTT AAATGACTTT CCTTAGGTAA TGATACTGGT GTGTTTCCN AAGGCCCTTT 240  
20 TAAAAAAGTN TNNNTAANTG ACTATCTGTT GAAANGGTGT CCTGTNCCTT NCTNCTAGNA 300  
ATNTGGGN 308

SEQ ID NO:4951

SEQUENCE LENGTH:97

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05897

SEQUENCE DESCRIPTION:

30 GATCGGAAGC AGAAGATGGC CTCTTAAAG AGTTTAGAAG AATTTATGGC AAATGTTGGT 60  
GGTCTCCTTT GTGTAAAATA AACAACAGAA CTTTAAA 97

SEQ ID NO:4952

SEQUENCE LENGTH:229

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05898

SEQUENCE DESCRIPTION:

40 GATCTGATAT TAAACATCC AGTAGTACGA GTCTGTTTAT TGAATTTTAT GGTCCCTTTC 60  
TTTGATGGTG CTGTCAGGTT TTCTAGGTAG AAATTATTTC ATTATTATAA TAAACAATG 120  
TTTGATTCAA AATTTGAACA AAATTGTTTT AAATAAATG TCTGTATACC AGTACAAGTT 180  
TATTGTTTCA GTATACTCGT ACTAATAAAA TAACAGTGCC AATTGCAAA 229

SEQ ID NO:4953

SEQUENCE LENGTH:144

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05899

SEQUENCE DESCRIPTION:



EP 0 679 716 A1

GATCCAGAGC CCCTCCCAT CTCCTCTCT CTAAAAACAA CCCTACCCCC CATTGCCACC 60  
TTCACCTCTG TGTCTCCAGC TGATTAGCCT CAGACTCTTC TTNTATTGTT TTTCTTTTGT 120  
AAATAAAAAG CACCAGGTTC CAAA 144

5

SEQ ID NO:4954  
SEQUENCE LENGTH:105  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05900  
SEQUENCE DESCRIPTION:  
GATCCGTGCC CTGTAAATG GATATNATGT TTIAGTGATG TCTNTAATAC ATTTGTAAAC 60  
TTCCAATAAA ATTTGAATAA AAGAAATNTT GCCATTCTTC TCAAA 105

15

SEQ ID NO:4955  
SEQUENCE LENGTH:325  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05902  
SEQUENCE DESCRIPTION:  
GATCTGGCAG CCCTGGAGAG GGACTATGAG GAAGTGGCGC AAAGTTTCTG AGGCATGTAT 60  
GATGGGTGCA AATGAATGTC AAGTTAAAT GGCATGTTT CTTTCAAGC CGNTATATGC 120  
CTAGTGGGTA GTTCCCCTGA TGAGCAGAAA AATTGAATC AAATCAGGCA AGACTCTAGG 180  
NTCCACACTA AATTAAGTGG GTCAGTANCG NCANTGANCA CATTATTCC TGGTCTACTG 240  
GGTACANGTC AGCTCTGCTT ACCTGNGGAG CNTTTGGAA GCTTAAGAGT NCTTTTGAAC 300  
CTGGCTTGAG GTCAACTTGT TAGGN 325

30

SEQ ID NO:4956  
SEQUENCE LENGTH:321  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05903  
SEQUENCE DESCRIPTION:  
GATCTGTACA GACAGGACAG AATGAACTC CTGCGGCTCT TTGGCCTGAA AGTTGGGAAT 60  
GGTTGGGGGA GAGAAGGGCA GCAGCTTATT GGTGGTCTTT TCACCATTGG CAGAAACAGT 120  
GAGAGCTGTG TGGTGCAGAA ATCCAGAAAT GAGGTGTAGG GAATTTGCC TNCCTTCCTG 180  
CAGACCTGAG CTGGCTTTGG AATGAGGTTA AAGTGTGAGG GACGTTGCCT GAGCCCAAAT 240  
GTTGTAGTGT GGTCTGGGCA GGCAGACCTT TTAGGNTTTT NCTGCTTTAG TTCCTGAGGN 300  
ANNINGENCA CTCITTNTNT N 321

45

SEQ ID NO:4957  
SEQUENCE LENGTH:313  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05907  
SEQUENCE DESCRIPTION:

55

EP 0 679 716 A1

5 GATCCAGGGG CTGATTGGCA GCGTGGAGGA GCAGCTGGCC CAGCTTCGCT GCTGAGATGG 60  
 AGCAGCAGAA CCAGGAATAC AAAATCCTNC TGGATGTGAA GACGCGGCTG GAGCAGGAGA 120  
 TTGCCACCTA CCGCCGCCTN CTGGAGGGAG AGGATNCCCA CCTGACTCAG TACAAGAAAG 180  
 AACC GG TGAC CACCCGTCAG GTGCGTACCA TTGTGGAAGA GGTCCAGGAT GGNAAGGTCA 240  
 TCTNCTNCCG NGNGCAGGTT CACCAGACCA CCNGTTTGAG GNCTCANCTA CCCC GGNTCG 300  
 GNCANCCATN TNN 313

10 SEQ ID NO:4958  
 SEQUENCE LENGTH:54  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05908  
 15 SEQUENCE DESCRIPTION:  
 GATCATTAAAT GTCATTGCAA TNGTTATTTT TTAAAATAAA TTTATAAAAA TAAA 54

20 SEQ ID NO:4959  
 SEQUENCE LENGTH:208  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS05912  
 SEQUENCE DESCRIPTION:  
 25 GATCTACAAG AGCAAGCCAA CAGAGTAAAG TGGAAGGAAG TTTATTCAGA AAATAAAGGA 60  
 GTATCACAGC TCTTTTAGAA TTTGTCTAGC AGGCTTTCCA GTTTTACCA GAAAACCCCT 120  
 ATAAATTAAA AATTTTAC TTAATTTAA GAATTAAAAA AATACAAAAA AGAAAAAATG 180  
 AAAATAAAGG AATAAGAAAGT TACCTAAA 208

30 SEQ ID NO:4960  
 SEQUENCE LENGTH:92  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 35 CLONE:HUMGS05913  
 SEQUENCE DESCRIPTION:  
 GATCCAAGTT ATAGATGGAA TTGAAGCCCT TGTNGCTGTA GATGTGCGTG CAGTCTGNCA 60  
 GCCTTAAGCC CACCTNNGCA CTTTATGATA AA 92

40 SEQ ID NO:4961  
 SEQUENCE LENGTH:270  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 45 CLONE:HUMGS05914  
 SEQUENCE DESCRIPTION:  
 GATCAACAGT AACTGGATGT TTTNAGGNG CTCAATTGGA ATAAAAATAT TNNAATCTAT 60  
 TTGGAGACCA AAGGCAAAAT CGGTTTTCTT ACCTTTGGAA TTATTCGTAC CTTTATGGT 120  
 50 AAATTCAGC TTTGACANGT ATTATGAGGA ACGTACCAAA AACC GGTTTG TAACAAATCT 180  
 NTAGAGNAGG TCTGAATCTN TCGNNCTTGC CTTTTCAGGT GCCATTCTA CTGGCCTAAT 240

55

ACAGNGCCAT TTGGCTTGTG AAGNNCCATN

270

SEQ ID NO:4962

SEQUENCE LENGTH:236

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05916

SEQUENCE DESCRIPTION:

GATCTATGCC CNTNTTAATC TCCATCCATA TAGGAGTCAC GTTCTTTAAG ACAGATGGTG 60  
 GTAGTTATTT TTGTGGCATG GTTAGATTG ACTGGTTTGG CAGAAGATTA CAGTTATGTA 120  
 CTGCATAATG NCATATACAA TAGTGGTCCC ATAAANNNNN TAATGGAGCA GAAAATCTAT 180  
 TGCCTCATGA TGTTTATGCC GGTTTANTGT CATAGNCTAG TGCATNACTC ACGTGN 236

SEQ ID NO:4963

SEQUENCE LENGTH:265

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05917

SEQUENCE DESCRIPTION:

GATCGAGTAA GGAATGACCT NTAGATTGTG CGACTTTTGT TTTTGTITTN TTAAATTTT 60  
 ATAAACCAAG AATGATTCT CCGCTTCCN TCTCCTCACC ATCTTCCCAG ACGGAGTTCA 120  
 AAGGCCACTT CTCAAGCAGC TTTTGGCACC TTCAGCCTCA GAGTGGAATC TTTTAAAGAC 180  
 AGGACCCCTA TGTCCAGGNA AGGGGAAAAG GAACNTTGCC ANTGATAGTG ACCACAGCAN 240  
 NNGCAANTAA TAGTAATNTT NATAN 265

SEQ ID NO:4964

SEQUENCE LENGTH:54

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05918

SEQUENCE DESCRIPTION:

GATCACATTT ATACAGTTAT AAAAATAAAG GTTTGATTTT GGTGTTCTT CAAA 54

SEQ ID NO:4965

SEQUENCE LENGTH:63

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05919

SEQUENCE DESCRIPTION:

GATCTCTATG GCTGTAAAT ATTTCTTTAT AGCGTTATTA AAGTGTGTCT TAATAAAAT 60  
 AAA 63

SEQ ID NO:4966

SEQUENCE LENGTH:233

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05920

SEQUENCE DESCRIPTION:

GATCCACAAA AGAAGTGAAA GTAGCCTTAA CTGATGACAT TCCACCATTG TNATTTGTTT 60  
CTGCCCCACG CTAAC TGATA CCATATATTC TTCCCCCGCC CTGAGAATG TACTTTGTAC 120  
ACCTATCCCA AACCTATAAG AACTAATGAT AATCCNACCA CCCTTGCTG ACTCTCTTTT 180  
TGGACTCAGC CCGNCTGCAC CCAGGTGAAA TAAACAGCCC TGTTGCTCAC AAA 233

SEQ ID NO:4967

SEQUENCE LENGTH:137

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05921

SEQUENCE DESCRIPTION:

GATCTCTGCG TTTTATACT GAGTGTGCCT AGGTTGCCCC TTATTTTNA TTTTCCCTGT 60  
TGCGTTGCTA TAGATGAAGG GTGAGGACAA TCGTGTATAT GTACTAGAAC TTTTATTATA 120  
AAGAACTTT TCCAAA 137

SEQ ID NO:4968

SEQUENCE LENGTH:90

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05923

SEQUENCE DESCRIPTION:

GATCTGTAAA CCCTTACCCC TTGCTGTTCA GAGAGCTACT CTTTGTAGTG TTCTTGCATG 60  
CATATATAAT AAATATTTT TCTATTGAAA 90

SEQ ID NO:4969

SEQUENCE LENGTH:259

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05925

SEQUENCE DESCRIPTION:

GATCTAAATC AATGCAATAA AGTAAGAAAA ATAAATAAAA GTATTGAAAA GATTGAAAAG 60  
AAAGAATTGA AGCTGTCTTT ATTCACAGAT AATGACTGTG TATGTTAATA ATCCTAGANA 120  
TCTACAAAAN TCTGCCAAAN CTAATTAGTG AGTTTGGTAA TGTTCAGGA TATAAGCTCA 180  
ATAGAAGTAG TCTTTNGTAT TTCTGTGTAT TAGCAGTGAG CATTGAAAA ATGANATAAN 240  
ANTACAGTTT CATTCAAA 259

SEQ ID NO:4970

SEQUENCE LENGTH:350

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05926

SEQUENCE DESCRIPTION:

EP 0 679 716 A1

GATCTGTGCC CTTGGTCCCA GGTGAGGCC ACCCCCTGCA CCTCCACCTG CCCCAGCCCC 60  
 TGCCTCTNCC CCAAGTGGGG CCAGCTGCCC TCACTTCTGG GGTGGATGAT GTGACCTTCC 120  
 TTGGGGGACT GCGGAAGGGA CGAGGGTTCC CTGGAGTCTT ACGGTCCAAC ATCAGGACCA 180  
 AGTCCCATGG ACATGCTGAC AGGGTCCCCA NGGAGNCCCC GTCAGTAGGG ATGTTTGCCT 240  
 GGNTGTTTAC GTNGGGGTGT NCAGTGNACG TGNAGGAGCA CGTGGGCGGC TTCTGNNGGG 300  
 GNCAATGGTT TGGGGNANGG GAAGGTGTGC CAGCAAACCT NGGNNGGATN 350

SEQ ID NO:4971

SEQUENCE LENGTH:202

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05927

SEQUENCE DESCRIPTION:

GATCCACGGG CTGCAGAATG GATATTGTAT TAGCAGGCAT GAAAACAACA TTCATCTCCT 60  
 TGTGCATCTC TGTCTGAGTT CTTGGGTGAC CAAATGCCTT GTCAATGAGT GTAGTATTTT 120  
 GAAAGGAATC TTTTTTTTTT TTTTCNAGC AGTAGGNCNC AANGGTGGGC TTCAATTATT 180  
 CAGTAAACTA TGTAANCAGA AA 202

SEQ ID NO:4972

SEQUENCE LENGTH:127

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05928

SEQUENCE DESCRIPTION:

GATCCCAGCT ACTCAGGAGG CTGAGGCAGA AAAATCACTT GAACCCAGGA GGTGGAGGTT 60  
 GCAGTGAGCA GAGACCACAC AACTGCACTC CAGTCTGGGC AACAAAGTGA GACTCTGTNT 120  
 TACTAAA 127

SEQ ID NO:4973

SEQUENCE LENGTH:249

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05932

SEQUENCE DESCRIPTION:

GATCCTATCA ATTAGACAGT AAATAAGTGC ATCTTTTTTG AGACAAATGC AGTAGGCAAA 60  
 TGTGACATT CACCAGGGCA CAGTCAATCC CTGACAATTT CAGAAGTTTT GTTGCCAATA 120  
 CTGATTTATG TGGGCAGATT CTGGNAGTCT GCTGCTCCTT CNCTCATGGA TNACCTNCNN 180  
 NNNCTACAG TTGCACCTAT TCTACACAAG AGTGGCATTG ANTNGTATCC AGGAAAGCTA 240  
 GANCAGGTN 249

SEQ ID NO:4974

SEQUENCE LENGTH:189

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05933

## SEQUENCE DESCRIPTION:

GATCCGAGTC GTCCGAAAT CCATTGCCCC TNTTCTCACA GTTATTAACC AGACTCAGAA 60  
 AGAAAACCTC AGGAAATTCT ACAAGGGCAA GAAGTACAAG CCCCTNGACC TCGGGCCTAA 120  
 GAGACACGTG CCATGCGGCN NCGCTNAACA AAGACGGGNG AACTTAAGGC CAGGAGAGCA 180  
 NNGNAGGAN 189

SEQ ID NO:4975

SEQUENCE LENGTH:230

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05934

## SEQUENCE DESCRIPTION:

GATCATCATC TTTCAGGTGG TCTCCTGGG CCTCCTGGCT GGCCTGGTGG TCCTATTCTA 60  
 CGNATATCCT GTCCNCTGTG AGTGGTATGA GTTCCTCACC TGCATCCCCT TCACTGACAA 120  
 GTTCTGTGAG AAGTACGAAC TAGATGCTCA GCTCCACTGA GCTNGCTGCG GGGTTNCAGC 180  
 GNNGGGTGTG CTCCAGCAGG GCCAGAGNCA GNCAAGANCT ACNCTGNGGN 230

SEQ ID NO:4976

SEQUENCE LENGTH:66

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05937

## SEQUENCE DESCRIPTION:

GATCATTAAAT TATATGTAAA ATAATATACA TTCAGTTATT AAGAAATAAA CTGCTTTCTT 60  
 AATAAA 66

SEQ ID NO:4977

SEQUENCE LENGTH:105

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05938

## SEQUENCE DESCRIPTION:

GATCTATGTC TTTCAGCTAT GTGCTTTTAA AACTTTGTAA TTTAGACATT GATATTGTCA 60  
 TCAGATTGCT TATCAGCATT GCCATAAATA TAATTATTAA TGAAA 105

SEQ ID NO:4978

SEQUENCE LENGTH:162

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05939

## SEQUENCE DESCRIPTION:

GATCTGCCCC CCTCGGCCAC CCAGAGTGCT GGGATTACAG NCGTGAGCAC CGTGCCTGAC 60  
 CAAAATAAAT AAATTTTAAA ATAGAAGTAA CTCAACTTCT GAGCTATGGA ATAGTTCTCT 120  
 GTACCTCCAG TACCTAATAA AGAACCCAAA TACTGCAATA AA 162

SEQ ID NO:4979

SEQUENCE LENGTH:189

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05940

SEQUENCE DESCRIPTION:

GATCGAGGAC TGGTACAGGA ACCACCAGGA GGAAGACCTG ACTGAATTCC TCTGCGCCAA 60  
 CCACGTGCTG AAGNGAAAAAN ACACCAGTTN CCTGGCAGAG CAGTGGTCCG GCAAGAAGGG 120  
 AGACACAGNT GCCCTGGGNG GGANGAAGTC CAAGAAGAAG AGCATCANNG CCAAGGCAGC 180  
 AGGNGTCAN 189

SEQ ID NO:4980

SEQUENCE LENGTH:66

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05941

SEQUENCE DESCRIPTION:

GATCTNTTTT AAAAATGTAT AAATTNCTTG AGTAATTCCT GGATTAAAGA ATATGCACTT 60  
 TTAAAA 66

SEQ ID NO:4981

SEQUENCE LENGTH:113

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05942

SEQUENCE DESCRIPTION:

GATCGCTGGC ATCAAGAGTG GAGAGGACCG NACAGCCGNG AAGGCAGCCT TTCANGAACC 60  
 TATGCTGGTG AGTGTAGGAG ATNGCTTANG AAGAGCTCAG ACCCTCTATC AAN 113

SEQ ID NO:4982

SEQUENCE LENGTH:316

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05943

SEQUENCE DESCRIPTION:

GATCATAGTT ATTATACAAT GTAGTGAGTC CTGCATGGGT NCTCGATGTG TAATGAAACC 60  
 TGAAATAATA AGATAATAAG AAAAGCAATA ATTTTCTAAA GCTGTGCTGT CGGTGATACA 120  
 GAGATGATAC TCAAATTATA ATAAACTCT TCATTTTGTG AATTATAGAA GCTACTNNNN 180  
 NTAAAGCCAT ATTTTTTTAG GGAAACTAAG GAGTGACATA GAACTGATGA ATGAGCAAAA 240  
 GTAAGTTTTG CTGGATTTT GTAGAACTCT GGACGTTGAG GATTATTAT GCTGTGGTTA 300  
 ACTTTAAATA TTTTNN 316

SEQ ID NO:4983

SEQUENCE LENGTH:338

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05946

SEQUENCE DESCRIPTION:

5 GATCAGCCCA CTTCACTCTC CCAAAGTGCT NGGATTACAG ACATGAGCCA CCTACCTGNC 60  
 CGGAGTTATT TCTAAACACA ACTAATATCA GAATCGCCTA TTTCATAAAA ATTGGATTCA 120  
 TCAAATNAAT CTTTGGCCAA CAACCATTG AGAATGATNN NNANCATCAT ACATAGGAAT 180  
 GCTACGTTTT CTAGGATTTG ACATTIACAG CANTCGAGAN TTACCCTATT TTGTAAATNG 240  
 10 AAATAACCAT TACTAAAAATC ATGCAAGCTT CAGCTNCTCG GGTTCCCTATA GNGTCACCTA 300  
 AATCGTATGT GNATGGATAC ATAAGGNTTA TGNATCAN 338

SEQ ID NO:4984

SEQUENCE LENGTH:154

15 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05947

SEQUENCE DESCRIPTION:

20 GATCCGCCCG CTTTGGCCTC CCAAGGTGCT GGGATTGTAG GCGTGAGCAC CCCTGGCCTC 60  
 NAATNTTAC ATTTATATAC TGAATTATAC ATTACATTAT GTACATATGA TAACTAGTTG 120  
 CTTAAATATT TTAATAAATT ATATCTAATG TAAA 154

SEQ ID NO:4985

25 SEQUENCE LENGTH:122

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05948

SEQUENCE DESCRIPTION:

30 GATCATGCAG AGAATATATA TTGTACTGTA GTAATTTTNT ATTTACATTT GTATGATGTG 60  
 ACATAATAGA TGTGAATGTT AATCACTGNT TGAATATGTT AATAAAGTTG TTAACTATA 120  
 AA 122

35 SEQ ID NO:4986

SEQUENCE LENGTH:133

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

40 CLONE:HUMGS05949

SEQUENCE DESCRIPTION:

GATCTCTATT TTAATNNTAA TTCTAGTTAG TTGTGCCTNA ACTCCAAAGA AATGNGAGTA 60  
 TAGTGAGGTA TGTCTGACTC CCACTTCTTA TCATGCTCTG AACTAGTTNT TTATGTTTCT 120  
 45 TTGTGTTNCC TTN 133

SEQ ID NO:4987

SEQUENCE LENGTH:351

SEQUENCE TYPE:nucleic acid

50 TOPOLOGY:linear

CLONE:HUMGS05951

55



## SEQUENCE DESCRIPTION:

GATCGCACAC ATGCTTTNTT NNNATATGGA GTGAACACAA TTATGTACCA AATTAACTT 60  
 GGCAAATTT CTATTGCCGTG TCCCATGTGC ATCTTATTTA AAATTTCCCC CATGGAAATC 120  
 ACTCTCCTGT TGAATATTC CAGAGCTCTA GGTGTTTAGG CAGCGTGTGG TGTCTGAGAG 180  
 GCCATAGCGC CATCATGGGC TGATTTTNA TTACCAGGTC CCCCAGAAGC AGGTGGGGAG 240  
 GCTCTGCTTN CTGCTGCCGG TCTNCAAGNC TTGGACCTNT GGACCCTGNT TTGTAAAGNG 300  
 TAAATTNGTA TCCTTNAGGG AAACCCAAGT GTCAACCTTG TTTNTTCAAT N 351

SEQ ID NO:4988

SEQUENCE LENGTH:310

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05952

## SEQUENCE DESCRIPTION:

GATCGACACA TTCGNATCTN NAATNGTGC TCTGGGGCCT GTCTGAGTGC CGTGGATGCC 60  
 CATTCCCAGG TGTGCTCCAT CCTCTGGTCT CCCCATTACA AGGAGCTCAT CTCAGGCCAT 120  
 GGCTTTGCAC AGAACCAGCT AGTTATTTGG AAGTACCCAA CCATGGCCAA GGTGGCTGAA 180  
 CTCAAAGTGC ACACATCCCG GGTCTGAGT CTGACCATNA GCCCAGATNG GGCACAGTG 240  
 GCATCCCGNA GCANCAGATT GNGACCNTGA GGCTATGGNC GCTGTTTTGA NGTTGGTACC 300  
 NTGCGNNGGN 310

SEQ ID NO:4989

SEQUENCE LENGTH:150

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05953

## SEQUENCE DESCRIPTION:

GATCTGAAAC AAAATCTTTC TAAACATTG TTTTAGTTGT CAAAGCACCA ACAGGACATT 60  
 TTGGGATGTG AAATGTAATT TCTTGGAATC TGTAATTTGT ACTTAATATT TNAGGCTTGT 120  
 ATTTAATATA ATAAATAGGT GTTTGTAAA 150

SEQ ID NO:4990

SEQUENCE LENGTH:240

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05954

## SEQUENCE DESCRIPTION:

GATCATCCCT TCACAATCCC AGAGTGGCAG GCGGGACCAG CCCCATGGTC TGGCTCCTGT 60  
 CACCTGGGTC CGTGCCAGCA CAATCTGCCA AAGTTCTAGA GACCCTGTTC CCTTCCCCAT 120  
 NAGGTACAT GCTTCTTCTG TGTGATTTT TTTTGTGTTT TATGGTTTTT GGAGCAATTT 180  
 AAATCCCAG TTGNNATTT TCACAAAAGA AANTAAAATT GCAGTTGCAA GCCCTTTAAA 240

SEQ ID NO:4991

SEQUENCE LENGTH:323

SEQUENCE TYPE:nucleic acid

EP 0 679 716 A1

TOPOLOGY:linear

CLONE:HUMGS05955

SEQUENCE DESCRIPTION:

5 GATCCTTTTT TGTACATTTA AGAATATTTT GATTATATTA AACAAAGACTG CTGATTTTGC 60  
TACTTTTTTT AAGGGGTCTT CANGTANGTA AAACATACAT CGTAGCTAGA AGAAAAATGT 120  
ACCTTAAATT TGCATCTTCC CTCTCATACC CAAGCTGTAA ACAATTGAAA TATTTTGTCT 180  
TAAATCACTT GGTCAATAC ATGCTTATTT GTTTTAAAC CTGTATCATC ANACTCTCTC 240  
10 TCNAAATTTA AAATGCTGTT GAATATGATA CTTTGTAGGA GAGAGTGTGC TCAGAACTTA 300  
GACGGGGTTT GGTAGGCCAA NGN 323

SEQ ID NO:4992

SEQUENCE LENGTH:110

15 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05956

SEQUENCE DESCRIPTION:

20 GATCTTAACC ATCACAAGTT TTTACCCTCT TCCTTCATGC CTGACCTCAA CCCCCTCTC 60  
CTCATCTAT TCCTAAATTA GGCTAATAAA GTGAAATTGG TATACTTAAA 110

SEQ ID NO:4993

SEQUENCE LENGTH:228

25 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05957

SEQUENCE DESCRIPTION:

30 GATCGCTTGA GCCCAAGAGT TTGGGACCAA TCTGAGCAAT ATAGCAAGAC CCCATCTCTA 60  
CAAAGAATAA AGAAAAATTA GACTAGCTTG GTGGCATGTG CCTGTGGTCC CAGCTACTCA 120  
AGAGGCTGAG GTAGGAGGAT TGCTTGAGCC TGGGAGGTGG AGGCATCAGT GAGCCATGAC 180  
CGTACCACTT CATTCCAGCC TAGGTAACAG AATAAGACCC TGTCTAAA 228

35 SEQ ID NO:4994

SEQUENCE LENGTH:182

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

40 CLONE:HUMGS05959

SEQUENCE DESCRIPTION:

GATCAAGCTA CACATCAGTT TTACAATATA AATACTTGTA CTACCTTAAT GATAAGNACT 60  
CCTTAAAGTT CCATTTGCTA ATNATTAATA CACTGTTTGG GCTGGCCAGT TTTTCATGCA 120  
45 TGCAGCTTGA CGATTGAGCA CAGTCAGGCC TTTGTATTAA AAATGAAANA TGAAANAACA 180  
AA 182

SEQ ID NO:4995

SEQUENCE LENGTH:300

50 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

55

CLONE:HUMGS05960

SEQUENCE DESCRIPTION:

GATCAACTGG TTTGTGTTTT GCTGCTGCAT TTATCCCAAG TNAACAGGT TTAATCTCCA 60  
 5 GANGAAAACC AAAATACCAT GGGATTTATG CTGNATTGAC ATCTTGCCCT AAACGNACAA 120  
 CATCATAGTA ATTTGTCATG GGCAACATGA CCAGNGAGAA GATTTTTGTC ATGATTTTAA 180  
 ATACACTGNC ACGCTACTGT TGGTTAAATT TAAACANGTT TTACCTGCAG NAATTCTCTC 240  
 ACAAATAACC NGCAATAACT TGAATGCAT NCCCTTTTGA ACACTTCCTT TNCTCATGGN 300

SEQ ID NO:4996

SEQUENCE LENGTH:162

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05961

SEQUENCE DESCRIPTION:

GATCCTGCTC CCTTCTGGGC TCTGACTCTC CTGGAAATCT CTCCAAGGCC AGAGCTATGC 60  
 15 TTTAGGTCTC AATTTTGAA TTTCAAACAC CAGCAAAAAA TTGGAAATCG AGATAGGTTG 120  
 20 CTGACTTTNA TTTGTCAAA TAAAGATATT AAAAAAGGCA AA 162

SEQ ID NO:4997

SEQUENCE LENGTH:136

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05962

SEQUENCE DESCRIPTION:

GATCTCAACA ATATTCTTCC AAAATGGCAT ACATCTTTTG TACAAAGAAC TTGAAATGTA 60  
 30 AATACTGTGT TTGTGCTGTA AGAGTTGTGT ATTTCAAAAA CTNAAATCTC ATAAAAAGTT 120  
 AAATTTTGT CTGAAA 136

SEQ ID NO:4998

SEQUENCE LENGTH:53

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05963

SEQUENCE DESCRIPTION:

40 GATCTGACCT CAGAAATATGC TTTCAGTGTT ATTTCTGACT AGTCCTTTTT AAA 53

SEQ ID NO:4999

SEQUENCE LENGTH:334

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05964

SEQUENCE DESCRIPTION:

50 GATCTGCATA AAGTNTTACA AACAAAATCC TCTTNATGAG CAACACATTT TTCAGCTGCC 60  
 AGTCAGACCA ACTGCTGTAA AGAACTTATA TCAAAGTGAG AAGCCACAGA AATGGAGAGT 120  
 GGAAATATAT AGTGGTCAAA AGANGATTAA GACAGTTTGG CAACTGAGTG ACAGCTCACC 180

EP 0 679 716 A1

CATAGACCAT CTGANTTTNC ACAAACCTGA TTTTCGGAA TTATCACTAN ACGGTAGCCT 240  
 NGAAGAAAAGG NTATNCTTTN CTANCATGGT TACCTGCAGC CAGGTGCATT TGCAAGTGAN 300  
 GTGTGCTGGT TGANGTCCTC TTNTAAGGGN ATTN 334

5

SEQ ID NO:5000

SEQUENCE LENGTH:117

SEQUENCE TYPE:nucleic acid

10

TOPOLOGY:linear

CLONE:HUMGS05966

SEQUENCE DESCRIPTION:

GATCTTCAC TAGATGCAC CAAAAGGACT GAGAACTAGA GAAAAGGGCT GCGATTTCTG 60  
 CTCTCCTTGT AAGATTGCAC AAAAGANTAA ATTGCATTGA TCGCTGTTTG CATGAAA 117

15

SEQ ID NO:5001

SEQUENCE LENGTH:290

SEQUENCE TYPE:nucleic acid

20

TOPOLOGY:linear

CLONE:HUMGS05967

SEQUENCE DESCRIPTION:

25

GATCCCCCTT CNAGGTAGTG AAAATNAAAT NCGCCGGAGT GTGGCTGCCT TCACCGCGGA 60  
 CCCTCTGTCT CTCCTGCGCA ACGTCTGAGC ACAGGAGCCC ATCCTTGGCT CTAGGNTTCC 120  
 NCCGCTGGAA GCCTTCTGTT CANACACCCC TTATGNTCCA AGGCCTGATG TGAGCCAGCG 180  
 GGGGGTGCAT GGGAAACTGN ACCNACAAC CCACATCCTN CATCCTGACT GCAGCANTGG 240  
 GGTTCCTCCGG CAGGGNTGGG TGAGGNAGGA AGGGGGTCAA GCCTGGNGTN 290

30

SEQ ID NO:5002

SEQUENCE LENGTH:284

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

35

CLONE:HUMGS05968

SEQUENCE DESCRIPTION:

40

GATCACCGTG AATCCGGCTT CCTCTGAGCA TTCGATGGCC TTAGCACCTC ATCAAGCCAG 60  
 CACATCCTGC CTGCTGTTGC AGCCTGGCTG GGTTTATTCT TCAGTTACCC TAATCCCATG 120  
 ATGCCTGGAA CCTTGATTAC CGTTTACAT CAGCTCTTGT ACTTTNAGT ATATTTTCAT 180  
 AATGAGTTAT ATTGTCATTT AGACTTTGAA CAGCTCTGGG AAATAGAAGA CTAGGGTTGT 240  
 TTCTTAAAGT TTAGCTCATG TTATAATAAA AAGTTGNAAT GAAA 284

45

SEQ ID NO:5003

SEQUENCE LENGTH:346

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05969

50

SEQUENCE DESCRIPTION:

GATCGTCCCT GGTCACCCGA CTTTGGAATT TGCACCATCA TGTTCAGTG AAGATGCTGT 60  
 AAATAGGTTT AGATTTTACT GTCTATGGAT TTGGGGTGTT ACAGTAGCCT TATTCACCTT 120

55

EP 0 679 716 A1

TTTAATAAAA ATACACATGA NGACAAGAAA GAAATGGCTT TTCTTACCCA GATTGTGTAC 180  
 ATAGNGCAAT GTTGGTTTTT TATAAAGTCT AAGCAAGATG GTTTTGTATA AANTCTGAAT 240  
 TTTGCAATGT ATTTAGCTAC AGCTTGTTTA NCGGCAGTGT CATTNCCCTT TGCACTGNAA 300  
 5 NGAGGAAAAA NNNGGNATTA AAAGGGTTGC CAANTTGGCA AAAGGN 346

SEQ ID NO:5004  
 SEQUENCE LENGTH:337  
 SEQUENCE TYPE:nucleic acid  
 10 TOPOLOGY:linear  
 CLONE:HUMGS05970  
 SEQUENCE DESCRIPTION:  
 GATCTGCTCG CCTCGGCTC CCAAAGGATG GGATTACAGG CACCAGCCAC TGNGCCTGGC 60  
 15 TGGCCTCTGN TTTTAAATAA AACNTGACTA GAGTGACTCC ATCTTAAAGT GAGTAGCTAG 120  
 GCACCTACAA GGTTCATGCT TATGGCCTGA AAATAACCAC ATCCCAGGCT GACCACCAAT 180  
 TATAATTACA GANTATTTAT GGCCATACAG NNCATGNTCC ACCAAGCCTG CAGAATGTCC 240  
 AAATNTCCTA AGAATGCAGC CNCCATTACT TANATATANC ATAAATGAGC ANGCTTAGGT 300  
 20 TGCAGGNTTA ATGGTCGTGG ATANCAGCAT TNGNCCN 337

SEQ ID NO:5005  
 SEQUENCE LENGTH:211  
 SEQUENCE TYPE:nucleic acid  
 25 TOPOLOGY:linear  
 CLONE:HUMGS05974  
 SEQUENCE DESCRIPTION:  
 GATCAGGGTT ACATAGGTTT GGTAATAATNA GTGCTGGAAA TNACTTTCT CCCAGTAGTC 60  
 30 TTAGGTCATG CTCAGTGAAC TTAACCTTTA TCCAGATATG GTTTTCCTTC AGCCTTTCTA 120  
 TTCCCTTTCT AGCCAGTGAA AGACCCGCTG CCCTTTGACC TCAGCCCCTC CAAGCCCCCA 180  
 AGTTTAAAAA GCCACCCNCT GCCACCAGAA A 211

SEQ ID NO:5006  
 SEQUENCE LENGTH:103  
 SEQUENCE TYPE:nucleic acid  
 35 TOPOLOGY:linear  
 CLONE:HUMGS05975  
 SEQUENCE DESCRIPTION:  
 GATCCTCCTG CTTTGGCCTC CCAGGGTGCT GGNATTGTAG GTGTAAGCCA CCAGGCCAG 60  
 40 GCTAACCCTT TATAAGAAAT AAAGTCTCCT CTCAAAAATT AAA 103

SEQ ID NO:5007  
 SEQUENCE LENGTH:265  
 SEQUENCE TYPE:nucleic acid  
 45 TOPOLOGY:linear  
 CLONE:HUMGS05976  
 SEQUENCE DESCRIPTION:  
 GATCCGTCTG GGCACGCTGG AGCAGGAGGC CACAGCAGAC GTGGAGTGGC GCTGGCACCC 60  
 50

55

EP 0 679 716 A1

TTACACCAAT ACCGCACGCA AGAGAGTCTT CCTGAGCACC GAGTGAGCAC ACTCACCCT 120  
CAGTCAGGAC ATGGACTTGG AACTCAGGAT TGGGCTGTCA TAGACAGACC CACCAGTAGG 180  
AACTGTCACA GAATGGCCTG CTGAACTGGG ATGTGGAAC TGGGCGGGTG GAGAGGTCTG 240  
AATAAACCGT CTGTGTCATG GCAAA 265

SEQ ID NO:5008

SEQUENCE LENGTH:308

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05978

SEQUENCE DESCRIPTION:

GATCATCAGC AATNCCTTCT GCACCANCAA CTGCTTAGCA CCCCTGGCCA AGGTCATCCA 60  
TGACAACTTT GGTATCGTGG AAGGACTCAT GACCACAGTC CATGCCATCA CTNCCACCCA 120  
GAAGACTGTG GATNGCCCCT CCGGGAAGCT GTGGCGTGAT GGCCGCGGGG CTCTCCAGAA 180  
CATCATNCCT GCCTCTACTG GCGCTGCCAA GGCTGTGGGC AAGGTCATCC CTGAGCTGAA 240  
CGGGAAGCTC ACTGGCATGG NCTTTCGTGT NCCCACTGGC AANGTGNTCA GTGGTGGTNC 300  
NGANCGTN 308

SEQ ID NO:5009

SEQUENCE LENGTH:336

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05980

SEQUENCE DESCRIPTION:

GATCCGATTT GTGGAGGATG AGAAAGATGA AGAAGACAAT NAGACGAGAA CACTTCTAAG 60  
GCGAGCCACT CCACACCCAG GGGAGTTAAA GCACATGAAA AAGACAGTGG AGAATTTACG 120  
GAATGACATG AATGCTGCTA AAGGACTGGA CTCAAACAAA AACGAGGTCA ATCATGCCAT 180  
TGACCGAGTG ACCACTTCTG TGTAGAGTTT CACCTCCAAG TTTTACCTCC TGTGTCTTCC 240  
TCTGTGTGCG AGACGTTTCT GTCTGCTTNC CGGGAGCCTC ACGTGCTCCT TGTCTTAACC 300  
AGCCCCCGNG NGCCATCTTT CCCGTGGAGT GTTGTN 336

SEQ ID NO:5010

SEQUENCE LENGTH:327

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05981

SEQUENCE DESCRIPTION:

GATCGCTTTT NTGACTGTTC ATCTGTCCTT GACAGTGGCT GTCATATTGA CTACTTTNTT 60  
GATTTGTGTG TATTGGGGAC ATTTTAAAGG CTGAGTTATT TTTGAATGTC ATGTTTATGT 120  
CATAGACGTA GTTTTCGCAT CCTTGAATTA AACTGCCTTA ACTCCTTTNG TGGTATAAGC 180  
AAAACCTCAT GGNCNNGTGC CTGGTATCCT TTTCTGTGT GGTGCGCTG TGTCTCTG 240  
CCTAGGGTTA AGTNTGCAAG ATAATACTC GTGAGTATTC AGAATGTNGT NCCTAATAAA 300  
TGCACITGTN GTCTGTCTTC TTTTNN 327

SEQ ID NO:5011

SEQUENCE LENGTH:326

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05982

SEQUENCE DESCRIPTION:

GATCAAGTTT TAAATCCTCC TCCTTCCCTT TTNCTGGAG TTTGAGGGC CAGAGTTTNN 60  
 NTTTTNTTT TTGTTTTGT TTTCTGCTT GCTACTGTTT TGTGGTGTG AAAAGTGGTT 120  
 TAAACCTGAG ACTAACTTAA ACACTTCCCTT GACCTTCTNG TTGCCTGTNC ATTTTGTGC 180  
 CAAGGAAGTA GCTGCCCCAG TGTATGTCTT GCCTTCTCCG CGTCATTGTT GGAAGAGGAG 240  
 AGATGCATCG AGCAGTCCCA GCTGCTTTTC ATTTATAACG GCTTCTTTCC AGGACCTGAC 300  
 AGAAGTCAGG GAAGAGTCCC TGGGNN 326

SEQ ID NO:5012

SEQUENCE LENGTH:326

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05983

SEQUENCE DESCRIPTION:

GATCATTTGA CTGGGCTGGA GAACATCCTT TTACATGGCC NTCCCATGGA TGTGCTGTAC 60  
 ATCTGCTTAA AAGAAAATAA TTACTTTNAT GAGCGTCTC AAAAGGACTC TTGGTGCAAC 120  
 AGACTNAATT GGAAGTCAGC TTTTCTAACT GTCAGTGCAC CAAGCTCTGC TGGAGGAGTG 180  
 ACCAGACTCA CGATTTGGTA TAGTGGGGCT CTCAAGCATC TCAATTTGA ATGTACATGC 240  
 TGCTGAGGAG CCGGTGAAGT CATCAGTTCC GCACATCCCT TCTACCCTNC AACTGCATGG 300  
 GAAGCCAAAG TNCTGGTTTT GAAGAN 326

SEQ ID NO:5013

SEQUENCE LENGTH:327

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05984

SEQUENCE DESCRIPTION:

GATCTGGGGG CTAGCAGTGA GTACCCGCAT GGTATCAGCC TGCTCTCCC GCCCAGGCC 60  
 TGCTGTCTCC AGGCCTATAG ACGTTTCTNT CCAAGGCCCT ATCCCCAAT GTTGTCAGCA 120  
 GATGCCTGGA CAGCAGAGCC ACCCATCTCC CATTACATG GCCCACCTCC TGCTTCCAG 180  
 AGGACTGGCC CTACGTGCTC TCTCTGTC TACCTATCAA TGCCAGCAT GGCAGAACCT 240  
 GCAGCCCTTG GCCACTGNAG ATGGAAACCT NTCAGTGTCT TGGNATGACC CTACCNAGGT 300  
 GGTGGGTCTC CAACANAGCC ACTTGTN 327

SEQ ID NO:5014

SEQUENCE LENGTH:293

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05987

SEQUENCE DESCRIPTION:

GATCTCAAAA AAGAAGGAAT TTCTCCTTG TTTCTGCAG TTAATGTAAG AATACTTTAA 60

EP 0 679 716 A1

ATCTCTAAGC TTCTGAAGTG TTAGAGGTAG AGATGGTCTA GTAAAGATGT AGTAGTAATG 120  
 TTTTATCCAT TTAGCATGTG TTTATNTNTC CATATGTNCT CAAAGGTGAC TTATTGGTTC 180  
 ACCTCAGTGA TATTACAGCT AAANNNTCA TTCATTAGCA AAAGGNAAAAG TGGTCTCAAC 240  
 CTAACATCAG ANGTGTTTCT NATTATGNTN TNATATTGCG TTGGANTATT GGN 293

SEQ ID NO:5015

SEQUENCE LENGTH:71

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05988

SEQUENCE DESCRIPTION:

GATCTATACA GGTATGTCTG ACGGGACGCA GCACCGTGGG CACGCACCAA ATAGAGTTTT 60  
 TAAAAGAGAA A 71

SEQ ID NO:5016

SEQUENCE LENGTH:354

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05989

SEQUENCE DESCRIPTION:

GATCCTNTTC TTTCAGCAGG TGAAAAATAA AACGCAGTTC AAATTTTCATG GTTTTAATTT 60  
 TCANCTCAGA AGCACTCAAA AATGCAAAAT GTGATAATGG GCACTTGTTC AAAAGANTTA 120  
 GTGTATCCAG CCTTCACTCC AGCTGGTTAA AAATGTTGCA CTNTTCAGCA ACCCTACCAC 180  
 TTTCATCTGC TGAAAGGNCA NATGTGCTTG GTTTTACNAT TATGTAATCA CAACTTACTT 240  
 TCTGCTTG TNNGCTTAAA ATTATGTATT TGGTCTTTGG GCTGCAANTT GGTTTTATGC 300  
 TGGATTGAT GNTNACTGGC NGNNAGTTTG ACCTTTGCTG NTATGGGGAA ANT 354

SEQ ID NO:5017

SEQUENCE LENGTH:149

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05991

SEQUENCE DESCRIPTION:

GATCGGAAGA GGGAGGAGAG GCAGTCTCTT NACAAAATAA AGTATTTTAA TTCATTNTA 60  
 TTTATTAAAT NAAAAACAA TCCCATGGTG TCCCTNTTGT TTGGTGGAAC CTAATGACTG 120  
 TNGAAATAA GTCCTGTNTT TNCCCTAAA 149

SEQ ID NO:5018

SEQUENCE LENGTH:259

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05992

SEQUENCE DESCRIPTION:

GATCCAAAAA CCTCCACCAT AGAGACTGAT AAATTGTAGC TATTGAAGCT GTACTNCTTT 60  
 GTACATAGGT GCTTTGGGAG ACTCACTCTG ATTATTGTAA ATTNCTCAC TAGCTACCCA 120



ACATTAAATT CAAATAACAG AGAATTCTA TTGTACAGCC TTGCAACTTT NCTTTAAGTT 180  
TAANCTTTNC TNNAATAA AATTTTAAGT GGCAAAAATN ATTATTAGAN GAGAAAANGT 240  
GTGCTCATT TTNANTATN 259

SEQ ID NO:5019

SEQUENCE LENGTH:173

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05993

SEQUENCE DESCRIPTION:

GATCACCTGA GGGGAAAGGN TTGTNTCTCT CTTTCTGTT GGGNGAGGGG GATGGGGGAC 60  
TTTTNTTGGT GGCTCCCACC CATATATCCC TCCTTNACCA TAGTACTCCC ACCCACTTCC 120  
ATCACCCATC CAATAAAATG CAGCCAGGTT TAGCCTTTGG CTTTGGTCAC AAA 173

SEQ ID NO:5020

SEQUENCE LENGTH:266

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05994

SEQUENCE DESCRIPTION:

GATCTACCCT CTAGTTTACT TGCTCGGGAG AAGAACTGA CTCGTTTTAT TTAGTGCCTA 60  
TTTAGCGAGC CCAGAGTAAC GTACATTTGT NCTGTTTCA ATTTGTGCT ATCGCAAATC 120  
ACAAAAAAC TGTATCAAT TCACATTCAT CATCAGCACG AGACCCATTT CCTTGTGCTC 180  
CTGCCAGCTC AGGNTATNAT GTTCTTTTT TCATGTTTGC CAGTCTGTTA GGTAAAANGT 240  
CATATGCCGT TGTTTAAAT TGCAAA 266

SEQ ID NO:5021

SEQUENCE LENGTH:121

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05996

SEQUENCE DESCRIPTION:

GATCAAGGTG ATTCTGAAAG TTTTAATTTT TAATGTTGTA ATGTTATGTT ATTGTTAATT 60  
GTACTTTATT ATGTATTCAA TAGAAAATCA TGATTATTA ATAAAAGCTT AATTCTCAA 120  
A 121

SEQ ID NO:5022

SEQUENCE LENGTH:58

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS05997

SEQUENCE DESCRIPTION:

GATCTAGTTG TATTCTCAT ACTAGCAATG AACAATTGGC AGTTGAAGTA AAAGCAAA 58

SEQ ID NO:5023

SEQUENCE LENGTH:238  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
5 CLONE:HUMGS05998  
SEQUENCE DESCRIPTION:  
GATCGTAATA TCTCGAACAT TACATAGACA CTTAAACCT TTAGTTGTAT TTCATCAAAA 60  
ATCTGTTTAT GCCCCACGTT GGTTTCAAAA CATACTATGC TTTNCTTCG TGTATTTC 120  
10 TATATNCATT TTNGTGTGTA TGTGTATGTC ACAAATATTG ATATGCCTGG TTGTTTATTT 180  
TGGTNTGCTA TTATGCCTTT TTCAAAATAT AAAANTAAAC TNGTAANTNC TAACNAAA 238

SEQ ID NO:5024  
SEQUENCE LENGTH:198  
15 SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
CLONE:HUMGS05999  
SEQUENCE DESCRIPTION:  
GATCGAGACC AGCCTGACCA ACATGGTGAA CCCTGTCTCT ACTAAAATAC AAAAATTAGC 60  
20 TGGGCGTGTG GGCACACACC TGTAATCCCA GCTACTCAGG AGGCTGAGGC AGGAGAATTA 120  
CTTTAACCTG CGGGGGGAGC CTAGATTGCG CTACTGCACT CCAGCCTAGG CAACAGAGGG 180  
AGACTCTGTC TCATTAAA 198

25 SEQ ID NO:5025  
SEQUENCE LENGTH:301  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
30 CLONE:HUMGS06000  
SEQUENCE DESCRIPTION:  
GATCTTGTGT CAAGTTAACA GGAAGACTGC CCACAGATGA CACTGCATTT GTATCCCTGT 60  
GGATGTAGAG TATTGGGAAG GCATTTNTTT AGTTTCATGC CTCCAAACCA TGCATTGTCT 120  
35 GTNATGTATC TGCCAGCCT TCTCAGAACT CAATGTTGTA CATTTTCCC TCTAGGACCT 180  
GAATTGGTCT TGGAGGCAGC TTTTAGAAAT CCTCTATGTA GTTCCTGTCC ACATGCACTA 240  
TATATNGGTT TCTCCNNGNN CCTCTCATGA ATCTGCTCGT TTCTCTACNT CTTGGCTACG 300  
N 301

40 SEQ ID NO:5026  
SEQUENCE LENGTH:301  
SEQUENCE TYPE:nucleic acid  
TOPOLOGY:linear  
45 CLONE:HUMGS06001  
SEQUENCE DESCRIPTION:  
GATCCTGGTA ACTGTTCCAG GATTGCTCCA GGTGAGAT GGTATTGCTA AATTTAAAT 60  
TAAACAAGAG ACCCAACAAC AGCTTTTAAA GTGTCTTCTA TNGCATTGTA TTTNNNTNAA 120  
CTTGCCCCAA TGATAGAAAA GTCTTTTGCT GAAATNATTT TNATGATTTT GGTATTATCGT 180  
50 TTATAAANG GAAAAGANAT ATACAACTT TGACTTTGGT GACTTTGTGA AGGTTTCTTT 240  
AAGATGTGCA TTCCTTTCTG CTTCNCCTCT AGTAAAGGNT TACTACCGG GAAAAAAG 300

55

N

301

SEQ ID NO:5027

5 SEQUENCE LENGTH:117

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06004

10 SEQUENCE DESCRIPTION:

GATCANGAAA AAGACAAAAT CTNTCAAAGC CTTCAAAACC AGGAAAAGAT AAGGAGCCCA 60  
 GGAAAAGNAA AAGGTAAAGT TCGAAGAANT TTAACCATT TTNACTAGCG ACAGCAN 117

SEQ ID NO:5028

15 SEQUENCE LENGTH:231

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06005

20 SEQUENCE DESCRIPTION:

GATCAGGAAT GGTGTGGATT GAGAACTTGT TACTTGAAGA AAAAGAATTT TGATATTGGA 60  
 ATAGCCTGCT AAGCGGTACA TGTGGGTATT TTGGNGTTAC TAAAAANNA TTTTNGGGAT 120  
 AAGAGAATTT CAGCAAAGAT GTTNTAAATA TATATAGTAA GTATAATGNA TANTANGTAC 180  
 AATGGAAAAN ACAATTATAT TGTAATAATTA TANCTGGGCA AGCATGGNTG N 231

SEQ ID NO:5029

SEQUENCE LENGTH:194

SEQUENCE TYPE:nucleic acid

30 TOPOLOGY:linear

CLONE:HUMGS06008

SEQUENCE DESCRIPTION:

GATCATGGAA CAGAATCACC CTCTCCTGCA TGTTTTNTT TCTGTCTCCT GCTTTNCTGT 60  
 TCTTTTCCA CTTTCTCTAT GTGTGAGTTG ACTTGGCTGC CTGTAGCTTC ATCGTCAAAG 120  
 CTGGTCCACG TGGGNTCAAC TTGGTGTCT CACTCTCCTC CAGCATTGTT TTTGGCATCA 180  
 AAGCTAGAAT TAAA 194

SEQ ID NO:5030

40 SEQUENCE LENGTH:89

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06010

45 SEQUENCE DESCRIPTION:

GATCNTTTT AAGAGCGTTT CCATACTATG NTTACATTTC CATATTTNTA TGAATAATTT 60  
 TGCATTCAAT AAACAACCAG ACTCAGAAA 89

SEQ ID NO:5031

50 SEQUENCE LENGTH:174

SEQUENCE TYPE:nucleic acid

55

TOPOLOGY:linear

CLONE:HUMGS06011

SEQUENCE DESCRIPTION:

5 GATCTTGGAG AGTTTCTCCT TGTGATTTTA GTTCATAAGT ATGTCACCTT TCATTTTATA 60  
 GNGTTCATCA TTGAGTAATG GATTAAGTGA AAATCCAGGA GTATCCATCT NCAGTTATGT 120  
 NCTGAGGTGA TAATNCATCC AACATATTTN TNAGCATAAA TATNANGCTT CAGN 174

10 SEQ ID NO:5032

SEQUENCE LENGTH:260

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06013

15 SEQUENCE DESCRIPTION:

GATCTAAAGC AGCCCTTTTT ACAGTCTAGT TAGGAGAGAG AAAATAATTG CAAATATCCA 60  
 CTTAGAGGCA AAGAACAATT TTTNATTATC AAAAAGGTTT CTGCACATTG TTGTGGCAAT 120  
 ATTGTATCTG TTTAGAAAAT GGGCTTTTCC AAAAGCAAAC AAAGATAGGT TCCTCAGGTG 180  
 20 ACCAAAAC TG AAAATCAATA TTTCCATGTT TCATTAATCA NGGCATAAAA TACAATTAAN 240  
 GCAAAATATT TTACATTAAA 260

SEQ ID NO:5033

SEQUENCE LENGTH:85

25 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06014

SEQUENCE DESCRIPTION:

30 GATCTCTGGA GGTGAGGCT GCAAGTGAGT CATGTTCTGT TCACTACACT NCAGCCTGGG 60  
 CGATAGAGTG AGAACCTGTC TCAAA 85

SEQ ID NO:5034

35 SEQUENCE LENGTH:352

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06015

SEQUENCE DESCRIPTION:

40 GATCCAGAAC ATGACAACAG AGAGCTGCGT CCACAGGGAA CAAAGCCCTG ACCTNTCTCT 60  
 CCACATTACC CTTACAAAAA CAGGCCCTCC CCATGAGAGA GCTACACGGC AGGGGCAGAC 120  
 ACTGTGAGTA TAAGCTACTT TCCTCCCTGG AGTGCTCTAT GTGGGCAGAA CATGCTCTCC 180  
 TTGCCTCTCC TGGAAGGTGT CTTCTCTATG GCCTGGCTAG AGCTGNAAAA AAGGGACACA 240  
 45 CCCNACTTCG GTAAAAGAAA NTAGGGAAAG GCCATATACA NNGNCAGACT TTGTAGTTTA 300  
 TTTTGTATTT TTTTNTAAAT NNTTNCCT TTTACATTTA ANGGNAGATT GN 352

SEQ ID NO:5035

SEQUENCE LENGTH:206

50 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

55

CLONE:HUMGS06016

SEQUENCE DESCRIPTION:

5 GATCTTAATG GCAAGAAGGC CACAGAGGTA CTTTNCCTTN TTNAGCTCAG GAAAATATGT 60  
 CAGGCTCAAA CCACTTCTCA GGCAGTTTAA TGGACACTAA GTCCATTGTT ACATGAAAGT 120  
 NATAGATAGC AACAAGTTTT GGAGAAGAGA GAGGGNGATA AAAGGGGGAT ACAANNGATG 180  
 TACAGAAATN NTTCTCTGGC TGGNCN 206

SEQ ID NO:5036

SEQUENCE LENGTH:351

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06017

SEQUENCE DESCRIPTION:

10 GATCTGGCCA TGTATATGGT AGCTGTGTTT TAATTGAGA ATCTTGAGGG TAGAGCCACA 60  
 AATTCAATT CTNACATTTC CATTTGCAAA GTGACTAGAG AAAAAGAAAT CAGCTTAAAT 120  
 GAGGTATTAA GTAATGTTA GAGTCGTAGG TATTAAGTAG AATATAAATC CTTAGAAATT 180  
 20 GTCTTTATAC CTTCAAAAAT TATNCTATGC ATTTNTCATA GANCTGTGAT TACAANGNNG 240  
 TCTGACTACC ATGTCTTTAA ACATATGGCA TCTCTCATCT TTCCTTCCCT TATGGGGGCT 300  
 ACATTNGTN CCATTTTCCA GNAGTAGNCT TTAAGTTNCC GGTGCCNNNC N 351

SEQ ID NO:5037

SEQUENCE LENGTH:131

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06018

SEQUENCE DESCRIPTION:

25 GATCCTGAGA CTATNTGCAT GCTNCTNTCT AAATGATAAT TAANAGGAAA TTTCATGGAT 60  
 TAACCCATGG GTTTAATGCA GCAAGGAAAC TTACAATGTC CCTNTATATA TAACATGCAN 120  
 CTTGTTTTGG N 131

SEQ ID NO:5038

SEQUENCE LENGTH:208

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06020

SEQUENCE DESCRIPTION:

35 GATCCTNCAG GAGATTCAGC GTCTCCGCTT GGAACACGAG CAGGCCTCCC AGCCCACCCN 60  
 TGAGAAGGCA CAGCAGAACC CCACGCTGCT GGCAGAGCTG CGGCTGCTGA GGCAAAGGAA 120  
 45 GNATGAACTG GAGCAGAGGA TGTCGGCCCT GCAGNAGAGC AGGCGGGAGC TGATGNGTCC 180  
 ANNTGGAAGA GCTGATGAAG TTGNNCNN 208

SEQ ID NO:5039

SEQUENCE LENGTH:150

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06021

SEQUENCE DESCRIPTION:

GATCTGAGTG ACAGGGTCAA GTTCTCTTTG AAAACAGGAG CTTTTCAGGT GGTAACCCC 60  
 CAACCTGACA TTGGTACTGT GCAATAAAGA CACCCCCTAC CCTCACCAC GGCTGGCTGC 120  
 TTCAGCCTTG GGCATCTTCA TAAATGGAAA 150

SEQ ID NO:5040

SEQUENCE LENGTH:365

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06022

SEQUENCE DESCRIPTION:

GATCTGCTGG GTTTTAAGGA GTGATTNCT TTCTNCCCCT TGAAGGGGAA AAAGCTATTT 60  
 CAATTGGTAC ATTTAAAGTC CCCCAACTAT GGGGAGGTAC CAATTCTGGA CANNNTGCCA 120  
 CTACAACAAC ACTAAACCTG AACTTTTCAA CTCCGTTGGT GGTGGGAGGC AGCGGGCAGA 180  
 AATTACTGT TGGCCACTGN CAGGTCTATT TNATATTCA AAGGAATATT GGGTGCTGCA 240  
 TATAGGNACT GAAGGGGTCA ATGNATTAAA CCTGTGATTA GGTGNTTTC CTGTCATTTT 300  
 TGAGAGACTA AAATNGTGGG GGGGCAGATG TNCANAATAC CTGGTACANG TTTTAAAAA 360  
 NTGGN 365

SEQ ID NO:5041

SEQUENCE LENGTH:147

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06023

SEQUENCE DESCRIPTION:

GATCTTNACC TTATTCAGTC AACTCCCTTT AAACCCCTGG CACTGAAAAC ACCACCTCGT 60  
 GTACTACGC TGAGTGAAAG ACCACTAGAT TTTNTGGATT TAGAAAGACC TCNNNCAACC 120  
 CCTCAAAATG AAGAAATCCG AGCANNN 147

SEQ ID NO:5042

SEQUENCE LENGTH:98

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06024

SEQUENCE DESCRIPTION:

GATCCGTCCT CATTTTATTG GTGATGATGA ATGGGAATAA AATNAGGGGG CTGTCTACTA 60  
 GAGCCTGGAA TAAATATGCT GCTTTGTGGA TTTTAAAA 98

SEQ ID NO:5043

SEQUENCE LENGTH:208

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06025

SEQUENCE DESCRIPTION:

5 GATCTGTATG TNAATATCGC CAAGCAGGAT ATCATGTTGT CCCTGGCAAA CCTGGTGAGA 60  
 CTCAACCAAG CCCTTTTCC CCCAAGCAAG AGGAAAATGG AATCTNTGTA TCAGTGTGGT 120  
 TTTGATGACA CTGTAAAGTT TNTACTTAAA GAAAATTGGT TTGAATAAAA TGCATAAAAG 180  
 TTTATANTGC ATTNNATTGT NNANNTGN 208

10 SEQ ID NO:5044  
 SEQUENCE LENGTH:211  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS06026  
 SEQUENCE DESCRIPTION:  
 15 GATCTTTGCC CACCTCTTCC TCAGAGCCCC CACTGAGGGG CCGTAGCCCT ATCTAGGGCT 60  
 GTGGAAGGAG CAGACTGGTT CCTAACTCTC TCCCTCCTCC TGCCACACA CATCAAAAGA 120  
 ATCTTCCCTA CACCCCTTCTC TGCCTTTATT TTTGATTG TGCAACTGT AACTAGGTGT 180  
 TTATGGAGTA AAGGAGAATG GAAAAAAGAA A 211

20 SEQ ID NO:5045  
 SEQUENCE LENGTH:345  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 25 CLONE:HUMGS06027  
 SEQUENCE DESCRIPTION:  
 GATCTTGTTC ACAGCAGTGC TTTTGTGAAC AATTATTTAT TTGCTGAAAG NGCTCTTCTG 60  
 AACTGTGTCC TTTTAATTTT TGCTTAGAAT AGAATGGAAC AAGTTTAAAT TTCAAGGAAA 120  
 TATGAAGGCA CTTCTNTTT TTCTAAGAAG GAAGTTGCTA GATGATTCCT TCATCACACT 180  
 30 TACTTAAAGT ACTGNGAAGA GTATCTGTAA ATAAAAGGGT TCCAACCTTT TAAANAAGNN 240  
 GGAANAACT TTTTGGTGCT CCAGTGTAGG GCTATCTTGT NNANAAANTG TCAACAAGGG 300  
 GGAAANGTAA GNCTGTCNAG CTNGGGGATT GGTCACTTGN NTTAN 345

35 SEQ ID NO:5046  
 SEQUENCE LENGTH:298  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 40 CLONE:HUMGS06028  
 SEQUENCE DESCRIPTION:  
 GATCTTATAA ATTTCTGGG CAAGAGTGTA TGCATACAAA GTTTTCACN TTGTGAAATG 60  
 TAATTTTNC TTTTTTGCAA NGGGATGAGG TGATTGGAAT TGCTTTNACC ATGCTGCCTT 120  
 TATTCTCAA CTGGCAAAC TAGCATGTTA GGTGTATTAA CCTCATCAGT CTTGAAGAAC 180  
 45 ATGTGGCTCA TGAGTATAAC ACTTCTGTAG NGNNCNCN NACANAAGTG AAGAATTAAC 240  
 TTCTCCTNCA GAACAAGTGC ANTTCAGAAG GCAAGCTCTG CATTCTACCT TGNTTGAN 298

50 SEQ ID NO:5047  
 SEQUENCE LENGTH:153  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear

55

# EP 0 679 716 A1

CLONE:HUMGS06030

SEQUENCE DESCRIPTION:

GATCGGGGAG CCACAGGGTG TCCAGACCCA GCGGGAGCCG AGGATTCAGG AGAATCTCCC 60  
 CAGTCAGCTT CAGAGGTGCC CACAGTNTGA GCTCTAGTGT CTNCCAGGTA GGGGGNCAAA 120  
 GCGGNAANCT GNCCGGGCCT NGGGGGTGCA AGN 153

SEQ ID NO:5048

SEQUENCE LENGTH:351

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06031

SEQUENCE DESCRIPTION:

GATCAACATT CGCAATGCCC GGAAACACTT TAAGAAGCTG GAGAGAGTGG ATGGCCCCAA 60  
 GCACAGTCTC CTTATGCGTT GAATATTGCC AAATNCTCTT NCTGAAAATC CTGAATTGCC 120  
 TTTTNGITT GCATCCTTTA TTTTNAATAT TCATAATGTC GTGTGCTTAA AAGTGGGCTT 180  
 TGAAGTGTGT GCTGCTTACT CCTNTCATCT TTCTCCCCGC TTCCCAGTC TTAAACATT 240  
 GGACGNTATT TACTCAGCTA CCCAGTAGAG CTTGAAGCTG ACCTTTCTGA GAAAGTTGGG 300  
 TATGTTGGTA ACACTTAAAG TAGGTGGTTC CGTGTGGTGT TCTTCANTNN N 351

SEQ ID NO:5049

SEQUENCE LENGTH:124

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06032

SEQUENCE DESCRIPTION:

GATCAACAAA TTGCTCAACC TGCAAAATCT TTGATTAGAC TTAGCCAGCC CATCTGGCCT 60  
 GCTTTGGGTT TAAAAAATAA AAAAANNTTT TTTAACCNC ANAANTGGAA AAAGGGGAAG 120  
 GGNN 124

SEQ ID NO:5050

SEQUENCE LENGTH:218

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06034

SEQUENCE DESCRIPTION:

GATCATGACT ACTGGGTTGT CATTTCATG GACAGTGCTA TGAATAAGT ATTTTGA 60  
 NCAACGGAAA TAGTTTATAT CGATATTCTT GATTCAAAT TANCCATCCA ATTGTTTAA 120  
 TAACCTTACT GATTTTTTAC CTATATCACT TTNCTCTNAC ACTGNAANTA TTAGTTCTAN 180  
 TAGCATTATG NCANTTACCT ATGTTGCTTT ATGAANGN 218

SEQ ID NO:5051

SEQUENCE LENGTH:128

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06035



## SEQUENCE DESCRIPTION:

GATCAATGCT GGCTTCCACG CCTGANTTCT ACCAAGTATG CCACACCAAA AAGGATTATN 60  
 AAGAAATTGG ACCTAGCATT TNCGTGACA ATCCAGTGTT TGGAGTCATG TCGTAAAAATT 120  
 GNCNCCNN 128

SEQ ID NO:5052

SEQUENCE LENGTH:234

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06036

## SEQUENCE DESCRIPTION:

GATCTCATTG AGATTCCAAA GAGAATCATT TACAAGTTAA TTTCTGTCTC CTTGGTCCAT 60  
 TCCTTCTCTC TAATAATCAT TTAGTGTTC TCAAAGAATT GTCTACATTA CCCATCTCCT 120  
 CTTTGGCCTC TGAGAAAGAG TATATAAGCT TCTGTACCCC ACTGGGGGGT TGGGGTAATA 180  
 TTCTGTGGTC CTCAGCCCTG TACCTTAATA AATTTGTATG CCTTTNCTCT TAAA 234

SEQ ID NO:5053

SEQUENCE LENGTH:145

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06038

## SEQUENCE DESCRIPTION:

GATCTGCAAG GCATAGGCAA GCCTCTTAGA GAATCAGAAA AGTGATTGG AAGGAACTTC 60  
 AGCTGTACT ACTTTGTTA AGCAAATCAA ATGCTGTTCT TTAATGTTAC TGGACGTTTC 120  
 AAATTAACA CAAGAAAACC TGAAA 145

SEQ ID NO:5054

SEQUENCE LENGTH:124

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06039

## SEQUENCE DESCRIPTION:

GATCAACTGA AGACCCCCAA AGGCCCTAC TTGATGGTTT TGAGGGGCAA CATTGACTCA 60  
 TTTGCCCCNT CCCTCTCGGA ATGTTGGACA AAGGGAATAA AATTGGGGAT ATGTCTACTT 120  
 CAAA 124

SEQ ID NO:5055

SEQUENCE LENGTH:118

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06040

## SEQUENCE DESCRIPTION:

GATCTAAAAC ANCTTCAGAC TACCTANGAA ATANTTNAC CAAATAAGAA ACAGCACTGT 60  
 GGAATAAAAT ATACCATTGT GAACATATCT GATGCTGCAA TGAAATGTAA AGTTCCTN 118

SEQ ID NO:5056

SEQUENCE LENGTH:316

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06041

SEQUENCE DESCRIPTION:

GATCTCCTAC TCCATCCAGT CCTGAGGAGC CTTAGGATGC AGCATNCCTT CAGGAGACAC 60  
 TGCTGGACCT CAGCATTCCC TTGATATCAG TCCCCTTCAC TGCAGAGCCT TGCCTTTCCC 120  
 CTCTGCCTGT TTCCTTTTCC TCTCCCAACC CTCTGGTTGG TGATTCAACT TGGGCTCCAA 180  
 GACTTGGGTA AGCTCTGGGC CTTACAGAA TGATGGCACC TNNNNNAACC CTCATGGGTG 240  
 GTGTCTGAGA GCGGTGAAGG GCCTGGAGCC ACTCTGCTAG AAGAGACCAA TAAAGGGCAG 300  
 GTGTGGAAC GGCAAA 316

SEQ ID NO:5057

SEQUENCE LENGTH:106

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06042

SEQUENCE DESCRIPTION:

GATCTATTTT TTTNCCTTG TATAACTTTG NAATAAATNC CTCATCCCTT AGACTAAGAG 60  
 AGTGGGTGTC TGTGAAAATN GTNTTCTCCT TCATAATACC TAAATN 106

SEQ ID NO:5058

SEQUENCE LENGTH:74

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06043

SEQUENCE DESCRIPTION:

GATCGAATTT AAAAGAACAA TGGAACCCCTG ACTACGTTTC AACAAAAATA AAACNGTTT 60  
 TTTCCCTCC TAAA 74

SEQ ID NO:5059

SEQUENCE LENGTH:325

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06044

SEQUENCE DESCRIPTION:

GATCTCTGGC GCTGGCAGAA GCAGAATCCT TCAGGCTTTG GCANGCAAGC NTGAGGACCC 60  
 TCCCCTACCA AGGACCAGGA AAAGCAGCAG CTGCCTGCTC TCCAGCCTNT GGCAGGAACT 120  
 CAGGGCCCTG GAGCTGCTGG GGCCAAGCCA AGGCCTNCCC TACCTCAAAC CCCAGCTGGG 180  
 CCCGNTTAGC CCACCAGGCA TGAGGCCAAG GGCTCCACTG ACCAGGAGGC CGAGGTCTCT 240  
 AACTCTTATN TTCCACAGGG TCCAAGAGTT CATCAGGACC NNNAAGAGTG AGTTNAGGGG 300  
 GGGCAAGGNT TCTNGNAACA AAAGN 325

SEQ ID NO:5060

SEQUENCE LENGTH:107

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06045

SEQUENCE DESCRIPTION:

GATCTGCCTN TAAAGCCAGT TTAAGAAGCA CTNATGANAA CACCTGGACT GTGTATAGNG 60

ATTGCACATT CCTTATCCTT CAGCTNCAGG ACAGGTGGAG CAAATGN 107

SEQ ID NO:5061

SEQUENCE LENGTH:112

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06046

SEQUENCE DESCRIPTION:

GATCTCAGAG CATTCAATT AGGGATGCTC AAACGCAACT TTTTCTACTT CCCCATTCA 60

GGTGTGAGAT GTAACCCACC TTNACCATAA ATTGGCTTTN NATAGTGCTA AA 112

SEQ ID NO:5062

SEQUENCE LENGTH:298

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06047

SEQUENCE DESCRIPTION:

GATCACAACA TACAAATTCA ATTCAGTGCA TGCTTTAGGT GTTAAGCATG AGATTGTACA 60

TGTTTACTGT TAGGTCCTTG CATCTGTGGT GCTAGGTGAG TATGAGAAGA TGTCAAGGAC 120

TGGACGTATT TTGTTGCCTA AAAAAAAAAAG GNTGTTTGTN GGCCTTTTAA ATATGCTTAT 180

TTNGTGTGTC NCNNNCTACC TTTTACACAC TGTTGCTTTG TGGGTTTGTT TNGNATGTGC 240

GTGTGTTATA CAGTNGTTAA ATTTCCNTGC AGAAAAATAA ATGTCCNGAA TTCTCAA 298

SEQ ID NO:5063

SEQUENCE LENGTH:62

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06048

SEQUENCE DESCRIPTION:

GATCTCCCAG TGAGCCATCA CGATGCCCCN TTTCAAATAA ATNTTAATAT TGTCACCAGA 60

AA 62

SEQ ID NO:5064

SEQUENCE LENGTH:55

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06049

SEQUENCE DESCRIPTION:

GATCTNCTGC CATGATGCCT ATTTGGTGTN TTTCTAATTA AAATGAAATC AAAAA 55

SEQ ID NO:5065  
 SEQUENCE LENGTH:51  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS06050  
 SEQUENCE DESCRIPTION:  
 GATCGCATCA TTGCACTCTA ACCTGGGCAA CAAGAGCAAA ACTCCATCAA A 51

SEQ ID NO:5066  
 SEQUENCE LENGTH:210  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS06051  
 SEQUENCE DESCRIPTION:  
 GATCTGCTGA AAGGNAAGCA AGAACTATAA GGAGGNTGTG TAGTTGCAAA AATGGCTCCA 60  
 TCGGTAACTC AAGCTTCAGA ATGTTATGAC ATACAGAAAA TCAAAGATGC TGTGTCTTAG 120  
 CATTGAGTAA TATGGGTGGT GCTGTCTGGT CAGATTCAGT NAACTGTTCA GAACAAAATT 180  
 NCCTCTGAAA TNCNGTTGAG AAAGNCTGTN 210

SEQ ID NO:5067  
 SEQUENCE LENGTH:211  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS06052  
 SEQUENCE DESCRIPTION:  
 GATCAAGTCA GCATTGCGG TCGGGATTG GGCAGGGAAC TTTGGGGTGC AAATATCTGG 60  
 TGAAACCACC AGAGAATTTN TTTGTCAAAG TGACATGTAT AATTTTAGTT GAGACGTGTT 120  
 TGTGTATATA TGTGTATTTG CCTTTNTTTA GTAGCACGGT TATTGCTAA AATAATTGTC 180  
 AAAAAATTGC TCTGTCGGTC GGTCTTTGAT N 211

SEQ ID NO:5068  
 SEQUENCE LENGTH:230  
 SEQUENCE TYPE:nucleic acid  
 TOPOLOGY:linear  
 CLONE:HUMGS06053  
 SEQUENCE DESCRIPTION:  
 GATCTAGAAT CTTGTCCTCA GGCTTCTAGG GGNTTATCTG AGTCTTTTAT CTAAGACAAA 60  
 TGCAACAGTT TTCTTTTCAA ATGCTCAGAA AAATAGTGAT GATGATGATG ATGATGATGT 120  
 TCATTGTAT ACATTIACAT GCAACCACAG CATTGTTTT ATTATAATAC CTTAGCAATA 180  
 ACTAATGAGA ACATGTTAGG TGATGTTAAA TAAAAAATT TTTTCCAAA 230

SEQ ID NO:5069  
 SEQUENCE LENGTH:108  
 SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06054

SEQUENCE DESCRIPTION:

5 GATCGCACGG ATGCAGCAGG AAGACCAGGA GGGGCCGCCT ACGTAGCCCC AGCTCCAGCC 60  
ATCCACCCCN CAGCCCTTTN CTNCAACGTC ACCANTAAAT TTNTTTTN 108

SEQ ID NO:5070

10 SEQUENCE LENGTH:339

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06055

SEQUENCE DESCRIPTION:

15 GATCACTGTT AATGATTTGC CTGTGGGACG CTCCGTGGAT GAGGCTCTGC GGCTGGTCCA 60  
NNNNTTCCAG TACACAGACG AGCATGGGGA AGTTTGTCCC GCTGGCTGGA AGCTGGCAGT 120  
GACACGATTA AGCCCAACGT GGATGACAGC AAGGAATATT TNTCCAAACA CAATTAGGCT 180  
GGCTAACGGA TAGTGAGCTT GTGCCCTGC CTAGGTGCCT GTNCTGGGTG TCCACCTGTG 240  
20 CCCCCACCTG GNTGCCCTAT GCTGACCCAG GAAAGGCCAG ACCTGCCCT CCAAATCCA 300  
CAGTATGGGA CCCTGGAGGG CTAGGCCAAG GNCTTTTN 339

SEQ ID NO:5071

25 SEQUENCE LENGTH:102

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06056

SEQUENCE DESCRIPTION:

30 GATCACAACC TCANCNAAGA CCACGANGAA GCCCNCAACA GCCACGCCCA CGACTGCCCG 60  
GACGAGGCCG ACCACAGACG TAAGTGACGG TAAAAATNGA GN 102

SEQ ID NO:5072

35 SEQUENCE LENGTH:231

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06057

SEQUENCE DESCRIPTION:

40 GATCGCCITA ATACCAGAAA TGATTAGAAG TGCTGATTTA GATTCAACAA ATACCATATG 60  
TCCTATCAT TTTTGTAAAG AAGAAATTGG TTAAGTCCTA ACTTCAATG TGTACCCAAA 120  
TACTTGATTT TTATGCTTTT NATAAAATGT AATTTTCAGC ATTANTACAC ATCCGATTAT 180  
GCCTTATTTA TATATGGNGG ANTAAAGGTT ACCATGTTTA TACCTGTAA A 231

45 SEQ ID NO:5073

SEQUENCE LENGTH:250

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

50 CLONE:HUMGS06059

SEQUENCE DESCRIPTION:

55

GATCTTGGTT TCATGTGTTT TTGAAAGTGT TATTGTTTAA AAAATGAAAA AAGCATATNT 60  
 GCTAAAGAGC TGTCAGGTTT TCATTACTGA CTCTGTANAA TACACTGNTC TTTGTGTACT 120  
 GTGTGTTATT TTGCCAGCT NGCTGCATTA GCCTTCAAAN GTATTTGGGA AACCTNAAGG 180  
 ATGAACCTAC AGTTTCTNGC AAAGGTACCA TTNCCTTTCC TGGGGGTANT TTNGGTCCCN 240  
 GTNAACTGGN 250

SEQ ID NO:5074

SEQUENCE LENGTH:298

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06060

SEQUENCE DESCRIPTION:

GATCCTCGCG GGCCTCGGAG AATTCCCCCA CTGCCATGCC CTCCCCCAGC TACCAGTGCA 60  
 CTAAGGCGCA CTTGGCCGAA CTTATGGTCC AGGCAGGCC AGGCCTCCGT GATGGCCGTG 120  
 GTGTTGCTCA GCATGCACAC CGNCCGCTGC ACTTTGGCCA GGTCTCCAC AGGGACCACC 180  
 GTGGGGGGCT GGTAGTTAAT NCCCACCTGT CAGAGATGGG CAGCATAGAA TGAAGTTTAT 240  
 ATTGGGCTCA GAAATGGGGA GCTCATTAAT AATCAGAGCT TGTGGNACCA GTTNCAAA 298

SEQ ID NO:5075

SEQUENCE LENGTH:80

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06061

SEQUENCE DESCRIPTION:

GATCACTGTG TCAATGGAT GGGAAATNTT ATNTTAATAT AAACAGTAAA ATAGCATTGT 60  
 TTTCACCTGC AGCTTTNAAA 80

SEQ ID NO:5076

SEQUENCE LENGTH:210

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06062

SEQUENCE DESCRIPTION:

GATCTGTATG TNCAATATGG TAGCTACTAG CTACATACAT CTATGAGCCA GACACTTAAG 60  
 CACTTGANGT TTGGCTACTG CACATTGACA CATGGTGTTA GTAAAANCAT AACTGGATA 120  
 CACTGGATTT TTGGNCTTAG TATGGAAAAA TATATTANGT ACCTCANTTT AAAAATACTT 180  
 ATTACATGTT AATATTTTGG TTGTANNNNN 210

SEQ ID NO:5077

SEQUENCE LENGTH:91

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06064

SEQUENCE DESCRIPTION:

GATCATGTTG TATTTNATTT TACTTATTTT TTTTACATTT CCCAAGGCTC TGTATCCAC 60

CTTTCATTA AATCATTCTA CCAATCTCAA A

91

SEQ ID NO:5078

SEQUENCE LENGTH:317

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06065

SEQUENCE DESCRIPTION:

GATCAATGTA AATCCTCACC TGCCCTTTGA AGAGCCAATA AGGGCATCTT TGTCTTTAAA 60  
TACAGCAAAT GTTATTCAGA TTTTGTACTT GTCTATCTGT TTACCTCAGT GTAGATGATA 120  
TGAGGATGGN ATAACATATGT AAATTGTTTT TGAAAATAAT TTGTTTCCCC ACAACTTTTG 180  
AAGGTTTTAT TTGTNGTTGT TATTACTAGT TCAGTCCCAA ACTNACCCTG TCCTTTTCAG 240  
AGAGCTAATG GCCATGCTTT NCTTCAAAGG AAAGAATAAT TNATTGGAA TGANAGTGGG 300  
GATTACTTTG CATAANN 317

SEQ ID NO:5079

SEQUENCE LENGTH:75

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06066

SEQUENCE DESCRIPTION:

GATCTTTATT CTAACCTTTT TTTGTAAAAA ATATCTATTG ATTTCCATAT GCAATAAACC 60  
TTTTTTTCAG AGAAA 75

SEQ ID NO:5080

SEQUENCE LENGTH:139

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06067

SEQUENCE DESCRIPTION:

GATCGCACCA CTGCACTCCA GTCTGGCGAC AGAGTGAGAC TACATCTCAA AAAAAAANGC 60  
CGCAATTTTN CATTGNTTC ANCAGANCTC TGCCATTCTA AACATTTCTA AACTTTTACT 120  
CTCAATTNCT GTACTTAAN 139

SEQ ID NO:5081

SEQUENCE LENGTH:125

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06068

SEQUENCE DESCRIPTION:

GATCTCATTT TCAGTTTAAG TAACTNCTGT TACTTAAGTG ATTGCACTTT TCTCAAATTG 60  
AAGTTTAATG GAATAATAGT TCTCAGGATA GTATTTTGTA AATAAAGATG GNCTTGAATA 120  
TGAAA 125

SEQ ID NO:5082

SEQUENCE LENGTH:284

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06069

SEQUENCE DESCRIPTION:

GATCCTACCA TGGCAAGAAG AGCTTCGAGA CTTTCTCTCA CCGCCGCTCT TGCCTGGTGA 60  
GGCCTCTAAT GAATGATGAA GGCCTGAAGG TCAGATACCC CCCGAGCCCG GCCAAGATGA 120  
CCCAGCACTG AGGAGGGGTT GCTCCGCTG GCCTGGCCAT ACTGTGTCCC ATCGGAGTGC 180  
GGACCACCNT NACTGGCTCT CCTGGCCCTG GGAGAATCGC TCCTGCAGCC CCAGCCCAGN 240  
CNCANTNCTA TGNTGACCTG CTGACCTGTG CACACCCNAC TTTN 284

SEQ ID NO:5083

SEQUENCE LENGTH:280

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06070

SEQUENCE DESCRIPTION:

GATCTAACCA TGACCTGTTT CACGTCATTG ACATTCAAAA TGAATGAAGG GATGANCATT 60  
TTCTCTGGTC ATTTTATTATT ATTTATACCC TTTTGCAAAT NCTAGTAGAG AATGAAGTGG 120  
AGGAATAAGT TATAAATGAA CAGTGGCTTA TGACTCCAAG AGTTAATCGT GTTATTTTGG 180  
TAGCTGTCTG TGTAGGTGTG CATGTNGTTG CGAGTTTGTA TTGNGNTTGA CAAGCAAAAN 240  
TTATATNATG NTTCAACTTT CTGGAATGTC TTNTAATTN 280

SEQ ID NO:5084

SEQUENCE LENGTH:62

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06071

SEQUENCE DESCRIPTION:

GATCATAATA TGAATNTCCC ACTTATTAAT AGCCTTTTAA TAAATATATA ATTAATTTCA 60  
AA 62

SEQ ID NO:5085

SEQUENCE LENGTH:57

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06072

SEQUENCE DESCRIPTION:

GATCTATAAT CACCAAGTGA CTCCACCCTG GGTGACAGAA TAAGACCCTG GCTGAAA 57

SEQ ID NO:5086

SEQUENCE LENGTH:68

SEQUENCE TYPE:nucleic acid

TOPOLOGY:linear

CLONE:HUMGS06074